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ABSTRACT

This document is the third edition of "Conditions of Education in Utah," covering the 1994-95 academic year. The first three chapters analyze issues relative to distance education and the Internet. Chapters 1 and 2 examine the pros and cons of distance education, and chapter 3 describes the construction, maintenance, and staffing costs associated with the delivery of distance-learning programs through EDNET. articles focuses on the finance and governance of higher education in Utah. Chapter 4 highlights the shifting balance of power between the campus faculty and the authority of the Board of Regents and the Higher Education Commissioner's Office. The fifth chapter addresses the financial condition of public higher education in Utah. The last two chapters describe state legislative policies enacted during 1993-94 and 1995. An appendix contains the Highly Impacted Schools Bill. Most chapters contain references. (LMI)

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ED 387 929

CONDITIONS OF EDUCATION IN UTAH

Educational Issues in Utah: Governance, Legislation, Technology, and Finance

Editors
Patrick F. Galvin
Bob L. Johnson, Jr.

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Educational Issues in Utah: Governance, Legislation, Technology, and Finance

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1994-95

Conditions of Education In Utah Yearbook

Editors

Patrick F. Galvin & Bob L. Johnson, Jr.

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FORWARD

This is the third edition of Conditions of Education in Utah, which this year is entitled "Educational Issues in Utah: Governance, Legislation, Technology, and Finance, 1994-1995." Included in this year's publication are chapters on last year's legislative activity, chapters on educational technology, and chapters on the governance and finance of higher education. The material contained within should be of interest to anyone concerned about the status of educational reform in Utah, including policy makers, educators, and parents.

The Conditions of Education in Utah has been produced by the Utah Education Policy Center, which is a part of the Graduate School of Education at the University of Utah. The idea of an annual "Conditions of Education" publication is not original with the Utah Education Policy Center. Similar publications are produced by university-based educational policy centers in other parts of the country. These efforts, as noted by the California policy group (PACE), are generally aimed at accomplishing the following goals: (1) to collect and distribute objective information about the conditions of education, (2) to analyze state educational policy issues and the policy environment, (3) to evaluate school reforms and state educational practices, (4) to provide technical support to policy-makers, and (5) to facilitate discussion of educational issues.

This document is based on public information, data which have been collected by public and private agencies, publications by researchers and other experts in the field of education, and related disciplines as well as original data that have been collected and analyzed by the contributing authors. These sources are noted throughout the text. The analyses and conclusions in this publication are those of the authors and are not necessarily endorsed by the Utah Education Policy Center, the Graduate School of Education, or the University of Utah.

Readers' written suggestions and observations are most welcome. Please send your comments to the Utah Education Policy Center, c/o the Department of Educational Administration, 339 Milton Bennion Hall, University of Utah, Salt Lake City, Utah 84112.

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Editors and Co-Directors of the Utah Education Policy Center
July, 1995

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Individual authors have collected data and suggestions for their chapters from many sources. Some of the people from the Utah State Office of Education that have contributed time, expertise, and support are listed below:

- Dr. David E. Nelson, Director, Evaluation and Assessment
- Dr. Douglas F. Bates, Coordinator, School Law and Legislation
- Dr. Hal Robin, Coordinator, School Finance and Statistics

Most importantly, however, individual authors have contributed enormous amounts of their time and effort in researching and writing chapters for the publication. These efforts are dedicated to the Utah educational community. It is hoped that this volume and future publications will contribute to the well being of public education in Utah, and more specifically, to the education of Utah's children.

INTRODUCTION AND OVERVIEW
CONDITIONS OF EDUCATION IN UTAH, 1994-95
BY PATRICK GALVIN

The chapters included in this year's Condition of Education Yearbook address three broad topics: (1) Analyses and position papers relative to distance education and the Internet; (2) Analyses of issues related specifically to higher education; (3) Analyses of legislative action relative to public education. We are especially pleased to welcome the contributions of those scholars examining issues related to the finance and governance of higher education. This is an area not covered in previous editions of the Yearbook. Additionally, we welcome the work of Steve Hess, George Brown, Fred Esplin and Carla Andrews-O'Hara, who represent the organization of the Utah Education Network. The editors of the Condition of Education Yearbook are dedicated to including many voices in the debate over the future of public education in Utah. The inclusion of voices representing higher education and the emerging Internet represents a recognition that public education is no longer an organization operating in isolation. Increasingly the work, governance and finance of public education will mesh (smoothly or otherwise) with that of higher education. Similarly, with the active involvement of business in the development and promotion of the Internet, educators the in public sector as well as in higher education will have to coordinate their activities with members of the community who have not traditionally been active members in the educational enterprise. One of the themes emerging from the diverse chapters presented in this year's Condition of Education Yearbook is a definition of the new organizational environment in which educators will increasingly be obligated to work. Effective educational planning will, in the future, require considerably more coordination between business, higher education, and public education. A missing voice in this year's dialogue is that of parents. Perhaps next year community members will raise their voice and add to the debate about the future of education in these formative years, which certainly will redefine education well into the 21st century.

This year's Condition of Education Yearbook begins with three chapters dealing with issues of distance education. A team of authors representing the work and opinions of Utah Education Network author the first chapter. Steve Hess, George Brown, Fred Esplin and Carla Andrews-O'Hara take the position that education is on the verge of a revolutionary change due to changes in the telecommunication technologies. "Education will become more competitive," these authors claim, "students will have more choices and as a result, education will become more consumer-driven." These are important claims and readers should take time to examine the arguments carefully. The premise of these authors is clear: failure to plan for the technological revolution will hold serious consequences for educators in the future. Increased enrollments and skyrocketing construction costs will severely limit the ability of taxpayers to provide the traditional

instructional environment enjoyed by youth of the past. Additionally, the work environment requires new skills and greater familiarity with the information revolution than we are currently offering. The authors of this chapter provide an outline of technical recommendations and working principles by which to develop the schools of the future.

Joan Sebastian, Assistant Professor, Department of Special Education, addresses the topic from a different perspective. Sebastian directs a distance education program designed to train rural special educators. The program utilizes an "integrated delivery" system that draws on a combination of instructional approaches, including interactive television, video tape sessions, and live on-site instruction. In discussing here experience, Sebastian addresses important problems associated with coordinating the activities of all these delivery systems. Students, she indicates, can find it difficult to keep the level of communication and interaction necessary to ensure a successful instructional experience. E-mail and voice mail are not always good substitutes for face-to-face exchanges. None the less, the program receives good reviews from students. Distance education can effectively reach students in rural areas of Utah, but not without costs. Sebastian notes these costs and the challenges that must be overcome to maintain a successful program. These are important points for readers developing their ideas about the potential of such technologies in the future.

The third chapter is written by Donald Gren, a Graduate student in the Department of Educational Administration, University of Utah, who is also a faculty member at Salt Lake Community College. This chapter directly addresses the costs associated with the construction, maintenance and staffing associated with the delivery of distance learning programs through EdNET. EdNET is Utah's interactive television system that came on line in 1985. The details of Gren's work are important because they provide a reference for considering the true costs associated with developing and maintaining such systems. The point Gren develops in his paper is that "schools without walls" are not cheap. One might save the cost of mortar and bricks by developing the EdNET system, but the cost of broadcast and satellite rooms is very high, as is the cost of maintaining the infrastructure necessary to operate these systems.

In my own opinion, computers and information technologies have considerable potential as instructional and learning tools. Some proponents of these technologies suggest that they hold the potential to reorganize public education into a "productive" enterprise governed largely by the rigor and rules of the market. From such a perspective, technology is viewed as the engine of social and economic change and, hence, with the introduction of new technologies, social and economic change is inevitable.

The intellectual reference for such arguments is Daniel Bell's book The Coming of Post-Industrial Society (1973). Bell's argument is that over the centuries society, has evolved through a number of stages that have enhanced the productivity of one sector of the economy without other sectors losing wealth. Thus, he argues, we have passed through the pre-industrial or agricultural era; we are in the midst of passing through the

industrial era where employment was located primarily in factories, and; we are approaching the post-industrial society where work is chiefly in services and knowledge based industries. For Bell, the issues of productivity and technology are key; they are the transforming facts undergirding the emerging post-industrial or information era. Recently some proponents of these perspectives have argued that investments in information technologies are of such a magnitude that one can claim society has passed from the industrial to the information era.

Imposing such a model of change on the entire educational system, however, ignores the culture of the schools, parents, and children involved in education, in additional to ignoring what is generally understood about the process of by which change occurs. Consideration of these other aspects of education mediates the promise of Bell's vision of social change. Access to information is not the only significant ingredient in comprising good education. Children require social groups and structured social and emotional interactions as well as intellectual tutelage. Thus, when information companies such as U.S. West Communications show images of children sitting before large computer stations interacting with the world of ideas, people and places, it is important for us to distinguish our sense of good pedagogy for our kids from good advertising for business.[1]

The second set of articles included in Condition of Education Yearbook focuses on the finance and governance of higher education. Jackson Newell and Katrina Green (Professor and Graduate student, Department of Educational Administration, University of Utah), highlight the shifting balance of power between the campus faculty and the authority of the Board of Regents and the Higher Education Commissioner's Office. Within this context they discuss five issues: (1) institutional role assignments and quality control, (2) the debate over competing academic calendar systems, (3) student credit transfer articulation, (4) concurrent enrollment, and (5) the initiative to increase the use of emerging instructional technologies. Their analysis of these issues leads them to the conclusion that the climate for governance of higher education is vastly different than that of just 25 years ago. They argue:

---

[1] A number of good and interesting books challenging the widely believed promise of computer and information technologies have recently been released. For example, Muffoletto & Knupfer (Computers in Education: Social, Political & Historical Perspectives. 1993) provide an excellent overview of the historical context in which computer technologies have emerged as the solution to the problems of public education. Perhaps on the most important observation of this book is the evidence provided that shows how businesses actively promoted the computer technologies they wished to sell as a solution to the failure of public education so loudly proclaimed in the early 1980s. Giacquinta, Bauer, & Levin, (Beyond Technology's Promise. 1993) report the results of their 3 year study of computer use among children at home. Their findings show that without strong support from parents, peers and the educational community, children do almost no academic computing at home. Children play games. Consequently it is important to keep clear the intellectual demands of education from the glitz of edutainment. Not all authors see problems with the emergence of computer and information technologies. Perelman (School's Out: Hyperlearning, the New Technology and the End of Education. 1992) suggests that the reform of public education into a market environment is inevitable because of the information technology.

> Not only are there important questions of substance facing higher education in Utah, such as quality assurance and the breadth and nature of public assess within the system, but there are also significant matters of procedure, regarding where authority to resolve emerging issues is (or should be) vested, as in the debate over academic calendar alternatives. In both cases, we express concern that the system and its constituent parts, arrayed in their current relationships, is ill-equipped to respond to the complexity of issues now facing them. In the last several years, for example, three of the nine institutions have "moved up the academic ladder" from community college to college, or from college to university status. Does this phenomenon provide encouraging evidence of the adaptability of the system, or disturbing testimony of its inability to abide by the principles it was established to protect?

Newell and Green's questions and analyses raise important issues that will affect us all as Utahns struggle with how best to organize and deliver the services offered through higher education. The debate discussed in this chapter is not unrelated to the subjects in earlier chapters.

Paul Brinkman, Director of Planning and Policy Studies for the President's Office, University of Utah, addresses the financial condition of public higher education in Utah. This next chapter provides a technical yet valuable picture of how the finance of higher education has changed over the years. Brinkman addresses three topics: (1) the adequacy of resources; (2) where resources come from; and, (3) the affordability of higher education. The conclusions of his analysis provide a useful framework for thinking about the fiscal condition of higher education in Utah. For example, Brinkman notes that overall, "a greater share of resources are being applied to mission rather than support areas" than just 8 years ago. On the other hand, per pupil expenditures for instruction have declined over time, during which time the burden of paying for higher education has been shifting from tax payers to students.

The final two chapters address legislative policies for public education-enacted state legislature. Bob Johnson, Assistant Professor, Department of Educational Administration, examines the policies of the 93-94 legislative session. His is an exhaustive work that should provide an excellent reference to those educators in need of information about many of the policies recently passed by the legislature. Johnson concludes that while both public and higher education did quite well by the 1994 Legislature, "it did little in terms of innovative and substantive reform." Johnson argues,

> Windfall revenues provided lawmakers the opportunity to fund many of those strategic and innovative educational reform measures adopted three years earlier by the Legislature in the progressive and visionary Strategic Plan for Public Education. Instead, the 1994 Legislature opted for business as usual, but at higher spending levels. Record setting revenues provided legislators with an opportunity to relive stress in several critical areas of

public and higher education. Instead lawmakers chose to offer a tax cut that proved more symbolic than substantive.

The final chapter of the Yearbook examines legislation passed by the 1995 Legislature that supported Highly Impacted Schools. Patrick Galvin, Assistant Professor, Department of Educational Administration, first describes the details of the legislation; how schools were selected to receive grants and how the grants were made. He then examines the question of what can be expected from these grants to public schools in terms of increased performance scores. Using existing financial, demographic and performance data (the Statewide Assessment Test), Galvin develops a statistical model that predicts the expected scores for schools receiving more money. The results follow a long line of inquiry in this area: that generally finds no systematic nor substantial relationship between additional resources and increased measures of performance. Galvin suggests that future legislation aimed at supporting these schools should work with other program efforts such as Utah's Center for Families in Education, and John Bennion's program to support urban schools. Each of these programs offer important kinds of support essential to the effective utilization of additional dollars for school improvement.

Combined, these seven chapters provide a valuable perspective on the condition of education in Utah. Evident in the collective message of these chapters is an increasing awareness of the interdependencies of education. If the trends developed in these chapters hold true, then educators who could once focus exclusively on the internal operations of their organization will be required increasingly to recognize the larger institutional environment in which they work. Failure to do so will certainly only further exacerbate the concerns of businesses, parents, and other agencies interested in addressing the social problems confronting society today.

POLICY CONSIDERATIONS FOR SCHOOL INVOLVEMENT IN ELECTRONIC TECHNOLOGY AND COMMUNICATIONS

BY STEVE HESS, GEORGE BROWN,
FRED ESPLIN & CARLA ANDREWS-O'HARA

Thomas Jefferson wrote that, "As the mind becomes more developed, more enlightened, as new discoveries are made, new truths discovered and manners and opinions change, with the change of circumstances, institutions must advance also to keep pace with the times." Rapid technological advances have made this statement even more true today than it was 200 years ago.

New telecommunications technologies have caused a communications revolution which affects virtually every aspect of our lives. The last two decades have brought us many changes in the way information is shared. Electronic networks using digital telecommunications can now combine the signals of television, telephones and computers, while linking schools, businesses, government, and homes. Information is now visual and instantaneous. Further, data and voice communication are transmitted to and received from many different global locations at once. These networks, often referred to as electronic highways, are transforming the way people work. They reduce the need for travel and have the potential to bring the very best knowledge and information to our schools. Education is strengthened by its ability to share current, accurate, information and knowledge. And because of this, schools stand to benefit greatly from this paradigm shift.

It is probable that within five years an interactive school curriculum, public school library collections, and other electronic services will be available on demand to every home linked to the electronic highway. Education will become more competitive. Students will have more choices and as a result, education will become more consumer driven. To take advantage of these changes schools must begin to plan for the future.

The Utah Education Network (UEN) (see page 24), operating under the auspices of the University of Utah, is familiar with the challenges associated with this new environment. As such, this chapter draws on UEN experiences and makes recommendations to other education facilities interested in making the transition into the electronic environment. Further, this chapter will address the key principles and the policies educational administrators should consider in positioning their schools to benefit from these new technologies.

Policy Considerations

To encourage educational change through the use of technology, the Utah Legislature has, with the support of the Governor, made available the financial support necessary to move schools into the future. Considerations include:

- Hardware, such as computers and video systems for use in schools;
- Networks to link these systems together;
- Training in the use of new technologies, and;
- Planning for the use of technology in the school of the future.

As school administrators look to the appropriate use of these new technologies, what are the key principles driving the telecommunications revolution on which they can build? What policies and issues should they consider? What will the school of the future look like? And what actions need to be taken for a successful transition?

Many educational policy makers see an opportunity for technology to provide greater *access* to education, with improvements in *quality* and increased *productivity*. These three principles are generally referred to when promoting greater application of telecommunications technology. They also serve to guide administrators and policy makers in taking advantage of what technology can potentially do to strengthen their schools. Decisions about which technologies fit with a school should be made from a strong sense of the school's mission and how the principles of access, productivity, and quality may apply to each school respectively, and within the system as a whole.

Principle One: Access

Through information technology people have greater access to information. This information can come in the form of full courses, library resources, student records, administrative data, electronic mail and/or other instructional resources that are available by linking to the 'world of information' via the Internet. Further, the information is immediate, can come from many locations, and can come in the form of text, voice, graphics, animation, full motion video, live interactive video/audio teleconferences, and instructional sessions.

The principle of access works two ways. First, schools can gain greater access to the parents and students they serve, possibly in their homes, *and*, second, provide their students access to a full range of external educational resources. Through networks, teachers and principals could immediately involve parents in the student's education. With connections to the Internet, teachers and students can have access to full courses, over 500 libraries, and even to millions of other students and teachers world wide. Consequently, it is vital that administrators adopt policies which give access to this vast network of information.

> "We live in an age where the competitive edge goes to the individual, company, or government institution who has the most immediate access to the right information at the right time. Telecommunications provides the

> means by which this information can be transmitted in the most immediate fashion possible. For students to be competitive, this immediate access to information and training regardless of geographic or cultural isolation, will be a necessity."(*SETOC*, 1989, p.9)

Likewise, students without access to this resource will lack the skills necessary to enter and successfully compete in a global marketplace. Teachers will increasingly serve as the gatekeepers to this vast network of knowledge and orchestrators of educational experiences. Their traditional role of "I talk, you listen," will increasingly expand to include students sharing their learning experiences. This will provide students and teachers with new insights associated with accessing world-wide information and sharing it through open forum discussions. This type of open information exchange in the classroom encourages students to explore new possibilities and stretch their imaginations -- complimenting the knowledge age we live in.

Ideally, these opportunities should be made available to *all* students. Equal access for all students must be a network principle that should be fostered and encouraged at every level of the educational system (see UEN highlights on page 24). According to Education Secretary, Richard W. Riley: "The days when No. 2 pencils and chalkboards were all the supplies teachers needed have gone. If the United States wants to stay competitive with other nations developing similar technology, it must give all students 'full and free access' to the information highway."(*The Washington Post*, 1994) This principle of 'full and free access' should be considered a right for all citizens in order to close the gap between those with access to more information and those with less.

Principle Two: Productivity

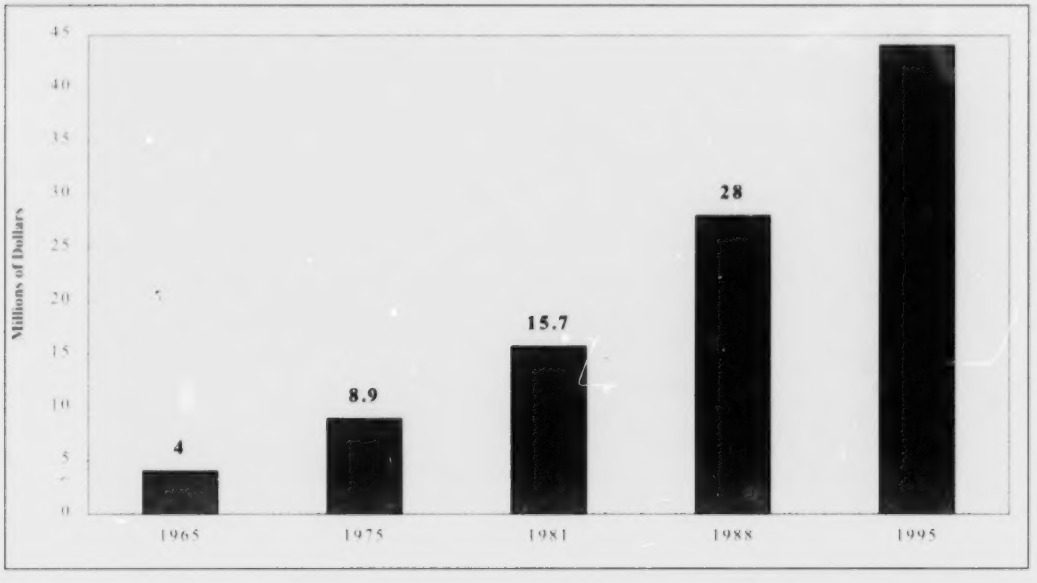
Moving information is more efficient than moving people. It cost less for people to share information electronically over a network and have them stay where they are, than it does to have people come together physically to share that same information with all the related cost to both the student and institution. Those costs include, buildings, parking lots, transportation, lost time in transportation, roads, and other related costs. Technology now offers a cheaper and more immediate alternative to transporting ideas and information. The increasing costs associated with building new facilities is staggering. In 1969 a Utah High School cost $ 4 million to build. In 1975 a comparable high school cost $ 8.9 million, in 1981 $ 15.7 million, in 1988 $ 28 million, and in 1995 a high school will cost $ 44 million to complete.

The rise in building costs, coupled with the expenses associated with building and maintaining new highways places an increasing burden on the state's taxpayers. Information technology offers an alternative to some of these rising costs, lightening the taxpayer's load in the future.

As the costs associated with labor and building increase, the costs associated with information technologies are decreasing. In the computer industry for example, "workstation performance increased at 54% per year for 1987-92."(Patterson &

Hennessy, 1994, p.26) Computers are improving in performance faster today than at any time in their history. Computer chips now hold vast amounts of information in smaller spaces, and for less money than ever before. This translates into consumer savings. And many in Utah are taking advantage of this. A poll conducted by the Deseret News, in December of 1994, found that 51% of Utahns now own a home computer. Further, 53% of those who did not own a home computer plan to buy one in the near future.

Figure 1
The Cost of Building a New School, 1965-1995



However, other elements of school reform must be combined with technology to bring about greater productivity. Schools need to consider how to best utilize a teacher's time. For example, teachers spend a large part of their time doing paperwork. Technology can eliminate much of the burden of paperwork by providing electronic maintenance of student records. Teachers with their own classroom computers can input student information directly into a database and, when necessary, retrieve it with a mere "key-stroke." This empowers the teacher by having student information instantly available to them and freeing them up to concentrate more on teaching and student needs, and less on paperwork.

Similar consideration should be given to other tasks which are currently being performed by the teacher. Differentiated staffing should be employed to ensure that teachers engage in the practice of teaching and are not responsible for tasks requiring lesser skills. The goal of individualized instruction can only be accomplished by making it the norm and not the exception.

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Principle Three: Quality

Technology, properly utilized, brings the very best ideas from the brightest teachers. The future of society demands that the best possible quality education be provided to all citizens. Through information technology, schools are able to access to the very best quality services including teachers and teaching programs, thereby contributing to the overall quality and scope of instruction.

Students no longer have to rely solely on text books (which may be years old) to get information. They can now get it direct and in real-time from a multitude of resources -- improving the quality of information received. For example, students utilizing the World-Wide-Web or Internet via computers can now access information directly from scientists at NASA, students suffering through the tragedy of war in Bosnia, explorers in the Antarctic, and more. A teacher and/or student is only limited by their own imagination.

When electronic courses and educational services are developed, the best teachers and expertise can be found. "Through telecommunications one good teacher can reach more than just one class of students at a time. The best teachers can do the teaching, with the added advantage of additional quality audio and visual experiences that would be difficult to produce in the individual classroom."(*SETOC*, 1989, p.34)

Additionally, electronic instruction is generally subject to the greater scrutiny imposed by instructional design, validation and technical industry standards. This coupled with the high production costs involved in video-course production, force the developing party to more carefully prepare each course.

Electronic courses also provide a consistent delivery of materials each time they are presented. They can also be recorded and analyzed. And because of this consistency, students' performance can be measured and the effectiveness of the course evaluated. The course can then be modified and continually improved. As a result, instruction becomes the subject of research and the total educational process is enhanced.

This country has recognized the need for educational reform. "In 1983, with the publication of *A Nation at Risk*, our leaders announced what most Americans already knew: the old system was failing us. As a result, major education reform bills were passed in 47 states allowing for more courses, more tests, and more time in school."(Osborne & Gaebler, 1993, p.315) The problems remained unresolved, however. "Dropout rates were higher in 1990 than they had been in 1980. Scores on the SAT and the ACT rose only 1.5% between 1982 and 1987, then leveled off or dropped."(Osborne & Gaebler, 1993, p.315) Clearly, the attempts to change education in the 1980s did not work. "Many schools won't -or can't- do what works. Twenty years ago companies were writing computer software that could teach reading, math, even writing - yet only a tiny percentage of all schools now teach that way. Business has embraced computer technologies, radically changing its training methods, but public schools have not."(Osborne & Gaebler, 1993, p.315)

"A study by Deborah Inman at New York University showed that the majority of the limited reform investments (of the 1980s) ($6 billion) went to the more-of-the-same kinds of measures rather than to any genuinely new, innovative, or more productive approach to meeting America's educational needs."(Perelman, 1992, p.103) The appropriate use of technology has the potential to fulfill those needs by empowering the student and raising productivity levels.

In 1993, the Council for Educational Development and Research (CEDaR) for the NCC-TET Forum on education and the National Information Infrastructure (NII), determined that the integration of technology and telecommunications into education serves to:

- Improve attitude and confidence - especially for 'at-risk' students.
- Provide instructional opportunities otherwise not available.
- Increase and expand learning opportunities.
- Increase mastery of vocational and work force skills.
- Significantly improve student problem solving skills.
- Improve writing skills as a result of using telecommunications.

Quality information through the use of technology is now available. Many schools across the state are using it to improve the quality of instruction. But this is not enough. All schools must be included in order to realize the fullest potential. One unattached school not only means that its students lack access to information, it also means the loss of their intellectual contribution to the overall system. Everyone benefits from full participation, because each school working together raises the quality and quantity of shared information.

PUBLIC POLICY ISSUES

Once administrators better understand the principles for adopting information technology they can focus on policy issues they will need to consider in their strategic plans. In a recent action plan developed for the Utah systems of higher education and public education the following issues were identified.

Establishing and Maintaining Network Access

Your school must have access to information networks (or electronic highways) with sufficient capacity, and at affordable costs. Obtaining funding to make the connections in the internal school network and its connection to the statewide and worldwide networks is critical. Without connectivity to these networks, a school will eventually become an island -- isolated from the updated, immediate, worldwide information services that are available.

Administrators should work with state media organizations (see Utah Education Network, page 24) to adopt legislation, provide funding, and establish regulatory policies that would increase and enhance existing infrastructure so ultimately their

schools will have greater access to the educational information available via the world wide network.

Further planning should include the development, adoption and publishing of a set of network standards based on a common set of principles (such as user needs, reliability, cost effectiveness, cooperation, and compatibility), to promote a common interface to the state's voice, data and video network backbone and to link together the information technologies in the state. (see Addendum A and B for the technical standards established by the UEN).

Involvement in Statewide Inventory of Existing Resources

Schools should join in any promising statewide attempts to inventory existing resources which would include information technologies, network systems, electronic library services, computing and other information resources, and student support systems that might be available.

Where applicable, these findings should be published, disseminated, and maintained in resource directories from public education institutions, businesses, and post secondary institutions. Ideally, role assignments for the delivery of courses and programs, library and information services and student services via technology-based education will be assigned to institutions, schools, and/or district offices who are best suited to provide these services. This will eliminate duplication, and ultimately costs for supplying these services.

Schools should inventory the information technology they now have. A schools information technology plan can then be formulated. The plan should include the inventory of where you are in relation to equipment, software, networking, policy to effectively utilize this technology and where you need to be in each of these areas. The plan would further point out steps to be taken to fill the gap between where a school is and where it needs to be.

With the above information gathered, and a plan developed, schools must then consider how they will interact with other schools on the statewide network. They must respond to the larger group to determine which electronic educational services they want to export and which to import. Exports should be based on the strength of the exporting school and imports should be based on the needs of the school's students.

Assessment of the needs of the school can then be determined and arrangements made to import available services. These may include courses which the school may not currently have faculty certified to teach. They may also include library resources that are currently unavailable in the school's library, or access to other teachers and students via electronic mail.

Preparing for the Paradigm Shift

As schools have increasing access to technology, administrators will need to consider how traditional educational practices can be changed to improve access, quality and productivity in the education process. While technology has changed dramatically

over the last 50 years, teaching and learning have remained virtually the same. Today, however, teaching tools and methods have taken on a variety of new forms. Some examples include distance learning through interactive telecourses, computer-assisted instruction in the classroom, access to the Information Super Highway via high-speed broad-band transmission facilities, and inter-active CD ROMs. These are by no means all inclusive of the newest tools available to educators. And the future undoubtedly holds many surprises.

These new teaching tools have brought excitement to some educators and skepticism to others. Those utilizing this vast resource recognize that the electronic highway does not replace teachers. It empowers them by helping them become more effective in the classroom. It provides them with increased ability by utilizing technological tools, *and* teaches them how to use them to improve education. Teachers will always maintain and provide the human touch necessary to teach, because they are the orchestrators of educational opportunities and experiences. For the learner, technology serves to further, and provide impetus to, that process. Clearly, with the challenges we face in the Information Age, we can not go forward with "business as usual."

Preparedness is a primary indicator of success in implementing a plan involving new technologies in the classroom. In fact, the elements most critical to using these new educational tools are preparedness and a continuing commitment on the part of the administration and staff. It is therefore essential that teachers, students, administrators, and support personnel are knowledgeable and enthusiastic about using these tools to resolve the school's educational needs and/or to share educational resources to improve access, increase productivity and enhance quality. Current business literature encourages the use of a "team" approach to problem solving and maintaining productivity. In considering the use of telecommunications technology, schools should explore this "team" concept and encourage a collaborative effort involving representatives from throughout various areas of the educational system including teachers, administrators, etc. The shared experiences and insights of these different groups will serve to awaken the system to the many possibilities of utilizing technology to teach.

Coordination of Services

The need for a statewide collaborative effort has been addressed in the context of planning and implementing technology in the classroom. This effort must be carried forward in the development of a master plan for the state in order to realize the full potential of technology. The state must develop a cohesive plan wherein all systems can "communicate" with one another. For example, consideration needs to be given to purchasing the software and hardware that will enable students and faculty to interact with other facilities. Interconnectivity is vital to the success, and proper use, of technological tools for education. In a study conducted in September of 1987, the Utah State Office of Education determined that "Network compatibility is essential and all distributive systems should have access to the statewide educational network in order to continue to minimize

the costs of software development and promote continued cooperation. Standardized software should be available at all levels of hardware implementation."*(Perspectives on Educational Technology*, 1987)

While each school, district, and state must define their own technological needs, consideration must also be given to flexibility. As technology changes, systems need to adapt to those changes. The best possible scenario is a system that provides the services necessary to enhance teaching in the present with the ability to expand to include new technologies as they become available. The goals associated with this endeavor are long-term. And this objective should serve to reinforce the decision making process relative to the purchase of new technological tools for the classroom.

Standards That Should be Adapted for Successful Planning and Implementation

Schools should be certain that standards are developed to ensure the success of a statewide educational technology initiative. As such, the following standards were identified by the Education Strategic Planning Committee in January 1992, and subsequently published in the *Utah State Public Education Strategic Plan*. The Committee identified the following areas as specific to achieving the goal of "employing technology to restructure and improve the teaching/learning process and its delivery."

- Provide a baseline of technological hardware and software to every learner and teacher including: a computer for every teacher's desk with access to both a Local Area Network (LAN) and a Wide Area Network (WAN) with appropriate software and appropriate technology work stations for every three learners in each environment/classroom.
- Enhance curriculum by automating existing materials and piloting technology projects. Teaching materials should be made widely available through the use of computer systems.
- Enhance teaching by providing a broad array of learning opportunities related to technology and its applications. Establish a technology consortia to train interested educators and place results of successful technology programs on the statewide curriculum server network.
- Provide incentives and rewards to teachers as they become facilitators for learning about technology. Obtain financial support for this effort through a multitude of sources.
- Create a model learning environment in each school district to foster and support experimentation, risk taking, funding alternatives, differentiated staffing and technology based links to homes, schools, universities and communities.
- Develop a statewide technology pre-service program leading to appropriate certification requirements for various levels of educators within a differentiated staffing model.
- Develop and implement a statewide technology in-service program for differentiated educational staff.
- Create data, voice and video communication links between all aspects of the education system by connecting every high school to a statewide curriculum server network and each class to a fiber-optic cable. Make sure electronic distance education capability links all education-related institutions.

- Establish standard data and file formats for curriculum objectives, test item banks, learning strategies/lesson plans and student tracking information, as well as linkages among them, and guarantee that microcomputer programs used in Utah will be able to import and export these standard file formats.
- Establish a statewide Curriculum Server Network in support of districts where curriculum objectives, test item banks, learning strategies/lesson plans, media resource access and student files are centrally available in electronic form to be up-and-down-loaded to district computers.
- Disseminate the state core curriculum and test item banks in a commonly used electronic format as well as through down-loading from the State Curriculum Server Network to supply each teacher and pre-service teacher with timely information and resources.
- Establish a resource information system and clearinghouse to support districts and regional service centers in coordinating the gathering, disseminating and sharing of curriculum, in service and technological information. The resource system will include State Office of Education curriculum and technology support role, Educational Technology Initiative Project Office, Educational Network Consortium and access to relevant educational Wide Area Networks.

FUNDING

Obviously, no plan can succeed without the proper funding. Technology is not inexpensive. As such, one of the most challenging issues regarding the implementation of technology in education is how to fund an undertaking of this magnitude and significance. In Utah, millions of dollars annually have been appropriated by the Legislature to fund the implementation, expansion and maintenance of new technologies for educational use. But this funding is only meant as a bridge to help schools get the technology needed to move forward. What will be needed in the future is on-going, base funding from district budgets to fund technology needs.

The other major financial issue will be the transition between where we are today in the traditional educational environment, to the future environment which will be characterized by more flexibility, with education virtually 'on-demand,' and where buildings and seat-time (average daily attendance) may not constitute the sole criteria for funding.

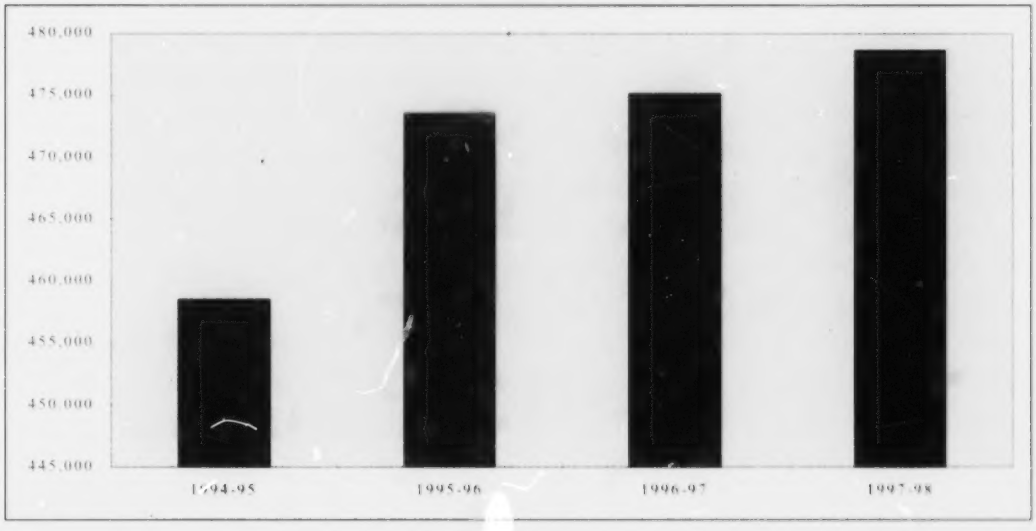
Funding may be based upon outcomes and results. Students should be allowed (and in fact, encouraged) to move through the system as rapidly and as flexibly as is appropriate for them. Obviously, the maturity of the learner as well as the capability of the system to meet the needs of diverse learning styles will have an impact on the type of educational experiences that must be provided.

The major question is how the funding should be defined in order to maintain present needs, and yet serve to move the system into the future. The Utah Legislature has provided significant funding for technology which is intended to position both public education and post secondary education for this transition. The expectation from the Legislature is that the use of technology will not only provide this positioning, but will

also provide impetus for the transition. They have been willing to invest in the future of the education system in the state by funding this technological infrastructure. The challenge lies in embracing this opportunity and committing to the changes that will be necessary to really reform the system.

Utah ranks first in the nation (26.4%) in population age 5-17, as a percent of the total population. (*Utah Education Association Research Bulletin,. 1993-94, p.1*) This situation presents a unique challenge in that the state's student population continues to increase with each year, and analysts see this trend continuing as we go forward. The following breakdown represents current and projected enrollments as determined by the Utah State Office of Education over the next few years:

Figure 2
Total Student Enrollment for 1994-95
Projected Enrollment Through 1997-98



By the 1997-98 school year (a mere three years from now), public education will be expected to provide services to another 20,078 students. Preparations must be made to accommodate the needs of this growing student population, and thereby ensure that all students receive access to the best possible educational standards.

"Public and Higher education in Utah, will be educating more students with limited or perhaps shrinking resources."(*SETOC*, 1989, p.9) This presents a challenge to education to become more efficient, innovative and productive in educating students. Taxpayers have shouldered this burden, but with the expected increase in student population taxpayers may be at, or near their capacity or willingness to pay more taxes. However, greater use of telecommunications technologies offer a possible solution to this challenge by bringing about greater efficiency and productivity in education.

Other financial implications might include:

- How will teachers be encouraged to change to the degree that the technology implies and will permit?
- How will learning centers (school and institutions) be modified to permit learners to take best advantage of the advantages that technology provides?
- How will the systems be funded when the criteria is based upon results?
- How will the 'facilitators of learning experiences' be compensated?
- How can the system be funded to attract the 'best and brightest' to the educational enterprise?

ACCEPTABLE USE OF THE NETWORK

Schools should look to promote innovation and educational excellence by facilitating resource sharing and expanded communications capabilities. Use of the new telecommunications technologies should be consistent with that purpose. Successful use of these new technologies requires that their users regard them as a shared resource, and cooperate to form a community of diverse interests in an effort to promote educational excellence and provide world-class educational experience. In an attempt to ensure the appropriate use of these systems, schools must expect their users to conduct themselves in a responsible, ethical, and polite manner while utilizing its services. Further, in support of these beliefs, and to guarantee the continued operation of these valuable resources, users must accept the responsibility of adhering to high standards of professional conduct and strict guidelines.

It is important to recognize that with increased access to computers and people all over the world also comes the availability of controversial material that may not be considered of educational value in the context of the school setting. It is therefore vital that schools establish an Acceptable Use Policy outlining appropriate behavior by system users. While the Policy should not attempt to articulate all required behavior by its members, it should assist in such judgment by offering a framework wherein members will have a better understanding of the expected behavior in relation to its use.

Faculty and Staff Training

Technology is only as effective as the forum of use. Therefore, consideration must be given to how teachers can best use the technology to assist them in providing the best learning experiences and opportunities for the student. In many instances, the very individuals who are attracted to the teaching profession (as it is traditionally understood), may not necessarily be the best 'orchestrators of instructional experiences' and may not have any desire to use technology as a teaching tool. If there really is to be increased opportunity for learners to access educational opportunities, improved productivity of the system, and an enhancement of the quality of the learning experiences, the teacher is the most important key.

Faculty and staff training are critical to the successful implementation of new technologies in the classroom. As a policy, training should be mandated for teachers who would teach on these video and data network, for the technical staff who would operate it, and for other support personnel who would assist in these efforts.

Further, training should be an evolving practice with input from staff members, participating institutions, faculty members and instructors who have used the systems to teach, and from students who have participated in the use of new technologies in the classroom. That input can then be used to improve training efforts for those participating in instructional television training, distance education broadcast training, and training for those participating in telecourses.

It should also be noted that participation in training from both public and higher education needs to be escalated to the level of a partnership. Once combined, the benefits will be realized in the form of improved quality and training for teachers, students and support personnel.

Faculty and Staff Incentives

Schools must engage in efforts which will encourage the use of new technologies in the classroom. Change can often be perceived as a threat to job security. To alleviate the fears associated with changing educational methods, schools must encourage open communication relative to the use of information technologies and share their findings with others. "Telecommunications brings greater access, productivity and quality education to students, particularly those living in rural areas of the state."(*SETOC*, 1989, p.8) Schools that do not recognize these benefits will ultimately be left behind in the Information Age.

Along with awareness, schools should provide incentives to teachers and staff to explore the benefits of utilizing these new telecommunications tools. These rewards can take on many forms and should be investigated by each respective school to determine the best possible procedure to satisfy the commitment to further technology in education. The process of defining incentives was outlined by the *Education Strategic Planning Committee Action Plan*, (1992). Suggestions included:

- Conducting a review of present practices in the districts of the state and nationally to determine which teaching incentives have proven to be successful.
- Identifying rewards of incentives for teachers to change their role.
- Determining the criteria of special incentive and reward packages related to state law, district policies and Master Agreements, and teacher organization policies.
- Defining a process to encourage key legislatures to introduce the enabling legislation.
- Commissioning school districts to adopt and establish incentive and reward programs based upon the above defined criteria and legislation.

- Establishing an endowment fund supported by the business community and their association(s) to be funded from their already established research/development and training budgets to provide special 'fellowship' awards to teachers who are exemplary in improving student performance as a result of implementing technology to assist them in facilitating learning opportunities for students.

Clearly, many of these ideas would require collaboration between a variety of agencies like the State Office of Education, Districts, Legislature, State and District Foundations, Vendors, Business Community, the state's Educational Technology Initiative Program(s), and respective schools. Long-term, the efforts involved in providing incentives would be rewarded as teachers and students derive the benefits achieved through the expanded knowledge brought on by the use of new telecommunications technologies.

INFORMATION TECHNOLOGY COMPETENCIES FOR STUDENTS

Schools must consider the competencies students need that will enable them to compete in the information age. During the industrial age, a person could literally move into a job from high school and maintain life-long employment with the same company. Companies were structured with a heavy emphasis on hierarchy and tradition. A person knew what they were supposed to do and often engaged in one functional task for a life-time. Today, hierarchical structures are giving way to flatter organizations. And traditional business environments are making room for new ideas which demand flexibility and daring. Employees must therefore develop multi-faceted skills in an effort just to keep up.

> "Just as restructured businesses are replacing the fragmentation of the old assembly line with work teams and quality work circles responsible for entire products, so restructured schools must find ways for teachers to address the needs of whole students -- an objective that will never be accomplished with fragmented courses, isolated programs, and batch processing." *(Darling-Hammond, Lieberman and Miller, 1993, p.17)*

As the industry base changes, and as businesses strive to compete in a global marketplace, they are demanding better skills from their employees. Hence, employers will look to the educational system to provide candidates whose skills are appropriate for this new era. A few of the most sought out skills for the future, as determined by the *Information Society* (1982) include:

- Evaluation and analysis
- Critical Thinking
- Organization and reference
- Synthesis
- Application to new areas
- Creativity

- Decision making with incomplete information
- Communication skills in many modes

In an effort to achieve these skills, students will need to become more conscious of their choices. They will need to become empowered, thereby taking on the responsibility of exploring different educational possibilities. For example, some jobs won't require a college education, but will require job-specific training and skills. Those students with the interest and aptitudes to perform those jobs will need the vocational experiences necessary to satisfy those interests. Likewise, students preparing to enter college need to be apprised of the opportunities available to them in satisfying their career goals. Proper information and guidance will assist students in helping them make the right decisions for their future.

In order to be successful in the new age, the education system needs to take into account the rapidly changing, global environment. It must put the concept of "assembly line" education where it belongs -- in the past. While it served its purpose in the industrial age, the knowledge age demands specialized, individual attention in order for students to realize their full potential. Technology makes that possible. Students can work at their own pace, facing each learning situation when they are ready. Further, teachers with computers in the classroom, now have student information directly at their finger-tips. This, too, allows for one-on-one interaction between and among the students and the teacher.

Schools must be prepared to meet the challenges associated with this paradigm shift by engaging in extensive research and planning endeavors. This will allow schools a better understanding of the realistic demands associated with bringing new technologies to the classroom. Careful consideration needs to be given to the school's mission, goals, and objectives to determine the needs specific to meeting the requirements of students. The focus needs to be on the customer (the student), and the ultimate customer (society).

THE UTAH EDUCATION NETWORK

The Utah Education Network (UEN) was established to help teachers and administrators make the transition from traditional to technology enhanced schools. Operating under the auspices of the University of Utah, the UEN is a consortium of public and post secondary education and businesses working together. The UEN partnership grew out of a long tradition of progressive use of technology to educate students with the primary focus of bringing the best possible education to Utah's citizenry. Even the name, the Utah Education Network, reflects the expanding role of technology in the classroom.

Today, the UEN offers several essential learning services to educators and students of all ages. These services are provided out of the Delores Dore' Eccles Broadcast Center on the University campus and are delivered through KULC Channel 9, KUED Channel 7, EDNET, and Utah*LINK*. Each seeks to provide technology in education to Utah's schools. It is the mission of the Utah Education Network to "Provide an

educational delivery system that is technology rich and capable of providing access to the highest quality and most effective instructional experiences and opportunities for the learners of the state regardless of where the instructor or learner may reside."

The UEN was established by the State Legislature in an effort to bring the latest in educational technology to the students of Utah. This legislative support has been demonstrated through continued financial support and the collaboration of efforts in planning and policy. The partnership has proven to be beneficial in helping the UEN meet the goals and objectives necessary to bringing a world-class curriculum to Utah's citizenry.

The UEN mission is to:

1. Provide an educational delivery system that is technology rich and capable of providing access to the highest quality and most effective instructional experiences and opportunities for the learners of the state regardless of where the instructor or the learner may reside.
2. Coordinate the efforts to implement the 'electronic highway' for education to permit access by all learners to the 'world of information' through network services that will eventually link together all the world's scholars, researchers and learners.
3. Focus upon the acquisition of world-class curriculum and programming that will include the most creative thinking, the most effective instruction, and the most productive materials available, and provide access to these resources for the learner when and where they are needed.

To adhere to that mission, the UEN provides the following services:

1. KULC Channel 9 is dedicated to the distribution of educational instructional programming. Further, it is part of Utah's larger telecommunications network, and distributes college and public education courses to communities and students, both rural and urban, who might not otherwise have access to quality instruction.
2. KUED Channel 7 is the local PBS affiliate providing instructional television Monday - Friday from 9:00am to 3:00pm, as well as educational programs characteristic of public television.
3. EDNET is an interactive (two-way) audio and video, closed circuit television system whose primary purpose is to distribute post-secondary and public education course work, vocational education and continuing medical education to rural and urban communities. EDNET will eventually link every high school, applied technology center, college and university.
4. Utah*LINK* is the UEN's newest addition, providing a menu of on-demand electronic educational materials and informational

resources via their data network. Utah*LINK* will eventually link every public school in the state.

These different programs were developed in an attempt to satisfy the needs of the Utah school systems to further educational opportunities through the use of technology. Serious consideration is given to the on-going needs of UEN's customers -- with the focus on the student and the emphasis on the future.

To assist schools in determining their needs, and in an effort to provide the UEN with valuable input as to the customer's requirements, it developed a site-selection process. This procedure allows schools an opportunity to explore their needs and determine what requirements they must meet in order to fulfill their own specific purpose. The following information provides examples of some of the questions that are addressed by the UEN Site-Selection Committee, and some questions an applying facility may want to explore when considering opportunities for growth relative to EDNET and/or Utah*LINK* services:

The Committee looks for criteria commensurate with the following objectives for a receive (import) site:

1. A demonstrated need for instruction that is otherwise unavailable.
2. The outlining basis for need such as: limited educational opportunity due to isolation; limited access to resources such as libraries; and/or local or regional economic considerations which limit faculty size, course offerings, etc.
3. Does the facility anticipation the utilization of community benefits such as Emergency Medical Technician recertification, Social Services Department assistance and training.

In addition to the receive site information above, origination (export) sites should identify the following:

1. What resources and commitments does the school have to offer a class?
2. What courses can the school offer? Do other schools need those services?
3. What support will the teacher have for distance learning classes such as additional preparation time, and/or whether a facilitator is available for content or operational support?

The issue of cost is included in the site selection process. Schools must clarify the following:

1. Is the facility above to accommodate the costs associated with the charges from originating schools to cover their costs such as aides, materials, etc.?

2. Is the facility above to accommodate direct costs for the school relating to in-class facilitators, materials, etc.?
3. Is the facility able to accommodate additional costs for the teachers who teach on the system?
4. Is the facility above to provide materials needed for telecourse development and presentation?

While EDNET and UtahLINK provide many services relevant to the use of technology in the classroom, serious consideration must also be given to the benefits of the broadcast medium. Television, a low-cost alternative, brings a multitude of learning opportunities into the classroom. KULC-TV and KUED-TV provide instructional programming that would otherwise be unavailable to many schools throughout the state. Each medium offers the student an opportunity to grow through the educational experiences provided by the Utah Education Network.

It is recommended that schools give serious thought to their own individual needs and their needs within the overall telecommunication's network. As previously stated, by developing a needs assessment based on these questions, a school can give due consideration to its current position and evaluate its direction for the future. Whatever the choice, the UEN recognizes that the future is here. As such, it strives to prepare Utah's citizenry for the unlimited possibilities.

CONCLUSION

Two hundred years ago, Thomas Jefferson knew that in order for us to compete, we must learn to adapt to change. Today, we are faced with the challenge of moving from an industrial to an information, and even further, to a knowledge age. The only thing that we can count on for the future is that it will change. The tools exist to make that transition smooth. And ultimate success depends on adaptation. Certainly, the call for change weighs heavy on the education system. Fortunately, technology is there to provide the tools necessary to allow us to reach our fullest potential. To ignore the potential benefits would be self-defeating. To embrace them would serve to provide us with virtually unlimited opportunities.

This chapter offers suggestions as to how educators and administrators can embrace those possibilities. Technology cannot be ignored. It touches virtually every aspect of life. Consequently, we must prepare students to meet the demands of a new age.

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INDEX OF TERMINOLOGY

CD ROM: Read-only, computer compact disks with a vast capacity to store huge amounts of all types of data, including multimedia graphics, video, sound and text. One CD-ROM can hold as much data as 500 floppy disks.

Distance Learning: Learning that takes place outside a traditional classroom setting with a student in one location and a teacher in another. .

Gateway: A special purpose device that allows conversion of information from one protocol stack to another .

Hardware: A computer and associated physical equipment directly involved in the performance of data-processing or communications functions.

Hub: This term refers to a hardware/software device that contains multiple independent but connected modules of network and Internet work equipment.

Information Age: A term that refers to the new era of open information exchange brought on by access to new telecommunication's technologies.

Information Super Highway: A seamless web of communications networks, computers, databases, and consumer electronics that make available vast amount of information.

Internet: This term refers to the world's largest internetwork, connecting thousands of networks worldwide and having a "culture" based on simplicity, research, and standardization based on real-life use. Much of today's leading-edge network technology came from the Internet community.

Networks: A collection of computers and other devices that are able to communicate with each other over some network medium.

Software: The programs, routines, and symbolic languages that control the functioning of the hardware and direct its operation.

Teleconference: A conference held among people in different locations by means of telecommunications equipment, such as closed-circuit television.

Telecourses: Courses that are offered to different locations by means of telecommunications equipment, such as closed-circuit television.

World Wide Web: A set of services on the Internet that contains a means for accessing information which includes graphics, sound, text, and other information. A highly user-friendly system of services.

ADDENDUM A
UTAH EDUCATION NETWORK
UTAHLINK/INTERNET
TECHNICAL STANDARDS

The following information contains guidelines which should be considered by schools planning to become Utah*LINK* sites.

UTAH*LINK* WIRING RECOMMENDATIONS

The school's internal wiring should be planned and documented prior to installation. An Ethernet, 10/100 Base-T topology, using Category 5 cable is preferred for the support of the local area network. Consideration should be given in upgrading older Arcnet or thinwire Ethernet networks to a 10 Base-T topology. Token ring networks can be upgraded to 16 megabit and can be serviceable many years into the future.

An ideal facility design would include a minimum of two Category 5 cables installed from one or more wiring closets to every classroom, lab and office. Computer labs may need additional cables or fibers from the wiring closet. Large schools should consider planning multiple wiring closets all linked together with multiple Category 5 cables or fiber, to a central or master closet. This type of design will support the data network (either token ring or ethernet) and provide an easy-to-troubleshoot environment for future expansion.

Distribution

Intelligent concentrators, 10 Base-T with SNMP management, should be used in the distribution of the LAN from the wiring closet to the classrooms, labs and offices. Where cost is an overriding consideration, lower cost non-SNMP hubs will work, but they will not provide information back on the status of the network, including potential problems that are occurring.

The wiring closet will require a dedicated 20 amp circuit, Uninterruptible Power Supply (UPS) and ventilation. A 19-inch equipment rack would be ideal; however, shelf space or wall space to mount electronics will work adequately.

UTAH*LINK* SOFTWARE RECOMMENDATIONS

Server

Utah*LINK* personnel have the most experience and we recommend that the school operate its LAN using Novell software, version **3.11** or greater. Novell **3.11** supports both PC and Macintosh computers.

PC DOS

Client

The computer on the network (Client) must run native TCP/IP transport software. If the school is using Novell 3.11 or greater, the client should be using the Novell ODI shells with ODIPKT TCP/IP interface. Other native IP interfaces may be used.

The ODI shell is included with the Novell Network license, and the ODIPKT is available FREE on the Internet and from Utah*LINK* on the gopher.uen.org.

For a standard PC configuration:

Computer:	66MHz 486 DX2
Memory:	8 MB RAM
Hard Drive:	340 MB
Monitor:	15"SVGA(600 X 800)
Graphics Card:	2MB VRAM
CD-ROM:	double speed
Diskette Drive:	1.44 MB
Communications:	
Ethernet Card:	10baseT RJ45,AUI,BNC
Modem:	14,400 bps
MS-DOS 6.2 or later	
Windows 3.1 or later	

PC Windows WINSOCK is the recommended Microsoft Windows interface. The WINSOCK interface is available from Utah*LINK*.

Macintosh Apple Macintosh clients should run native TCP/IP transport software. The recommended software is MacTCP. MacTCP has been licensed from Apple by UtahLINK for use in Utah's secondary education. MacTCP can be downloaded with other recommended Macintosh software from gopher.uen.org.

For a standard Macintosh configuration:

Macintosh 660AV
16 MB of RAM
500 MB hard disk drive
CD-ROM drive
17"Apple color monitor
System 7.5

Internet The LAN should support electronic mail, Gopher, Telnet, FTP and Web or Netscape applications. Various application software is available free on the Internet and from Utah*LINK*. For example, packages like Pegasus

Mail work well in a Novell Netware environment with DOS or Windows. PC Gopher III or WinGoph are good DOS/Windows products from the University of Minnesota. Clarkson Telnet and Clarkson FTP are also excellent free applications.

Recommendations for the Macintosh include: Eudora works well for electronic mail, MacGopher or TurboGopher are good gopher clients, and NCSA Telnet and NCSA FTP function properly.

Utah*LINK* can provide a package of Internet/mail clients for both the PC and Macintosh computers.

UTAH*LINK* ACCESS AND SUPPORT

Utah*LINK* The Utah Education Network will provide the CSU/DSU and the data router to connect your site to Utah*LINK*. The school is required to provide a secure, well-ventilated room for the CSU/DSU and data router. A separate 20 amp power circuit is also required. The equipment should be located within 100 to 200 feet of the school's telecommunication's room. The school is responsible for the installation of two Category 5 cables from the school's telecommunications' room to the CSU/DSU and data router location. The router and CSU/DSU must be left on at all times to ensure a reliable connection to the Internet. The local LAN will connect to the data router via an Ethernet port.

Support Your local LAN administrator will be expected to support most of your site's computer needs. Utah*LINK* provides LAN administrator support training at various sites across the state. The training includes information on the configuration of Internet/Utah*LINK* software, transport and applications.

Standards, recommendations, and information change rapidly in the world of technology. New applications become available on a consistent basis, and upgrades to existing applications are written to add functionality and to fix bugs. This document will be updated on a continuing basis as the technical environment changes. The maintenance and upgrading of local area networks, transport, and applications software is an on-going process and will be the responsibility of the site.

Further information is available on Utah Education Network gopher at **gopher.uen.org** or stop by and visit our WWW server at **www.uen.org**. Questions can also be sent to us via an e-mail at **utahlink@uen.org**. Our Help Desk phone number is 1-800-836-4396.

ADDENDUM B
UTAH EDUCATION NETWORK
EDNET
TECHNICAL STANDARDS 4/5/95

The following information contains guidelines which should be considered by schools planning to become an EDNET site.

Classroom Requirements

Size	Classroom size should be a minimum of 500 square feet, with a minimum dimension of 20 feet by 25 feet.
Use	The EDNET classroom should be dedicated to EDNET/distance-learning activities. The classroom will also be used for after-hours events, such as adult education and meetings.
Location	The classroom selected should be located near a main or secondary school entrance. This will allow visitors easy access during after-hour events.
Windows	If the classroom is located on an outside building wall, all windows should be equipped with curtains or blinds.
Floor	For sound quality reasons, the classroom floor should be carpeted.
Lighting	The classroom lighting is very important to the quality of video reproduction. Classroom lighting of 75 to 100 foot candles can be produced using standard four-bulb florescent lighting fixtures. The recommended color temperature of the lighting fixture bulbs is 3000K.
Seating	The school is required to furnish the classroom with tables. Tables provide an improved environment for the use of student microphones.
Noises	Disconnect all intercoms and bells from the selected classroom.
Power	The classroom requires a separate and dedicated 20 amp, AC power outlet.
Telephone	The classroom equipment provided by EDNET includes a Fax/Telephone for off-site communications and for the use of transporting documents. In order to support the Fax/Telephone equipment, the school is required to provide a dedicated telephone line with long distance access in the selected classroom.
Internet	The EDNET classroom equipment requires an Internet connection, provided by EDNET/Utah*LINK*, to communicate to the EDNET Technical Operations Center (TOC) for system scheduling and network operation. The school is required to install two Category 5 data cables from the EDNET classroom to the Utah*LINK* data router.
Support	The school is required to select a site coordinator. The selected coordinator will be trained in the use of the technology and all programming and scheduling responsibilities by the EDNET staff.

EDNET Network Connection

Fiber — Whenever possible, the classroom will be connected through the use of fiber optics to the EDNET network. The use of fiber is dependent on the school's location and the available telecommunications technology offered by the Local Exchange Carrier. If fiber is not available, other technologies such as copper based T-1's and microwave will be used.

Installation — If fiber is selected as the school's transport, the connection to the fiber network will require the installation of one 4-inch or two 2-inch conduits from the fiber provider meet point, usually out in the middle of a nearby street, and then extended into the school to the fiber optic equipment room.

Conduit — The school or district will be responsible for the cost of the required conduit. The conduit installation can cost from $2,000 to over $10,000 per site.

Equipment — The fiber optic equipment, provided by the Local Exchange Carrier, interfaces the classroom into the EDNET network. The fiber equipment requires a separate room, equipped with a 20 amp dedicated power source and ventilation. The selected room size may vary from a small closet to the school's existing communication room. The room should be within 200 feet of the selected classroom. Cable access between the fiber equipment room and the selected classroom is required. The EDNET installation staff will provide the necessary fiber and classroom cables.

T-1 Video — If fiber is not available for the EDNET connection, compressed video equipment will be installed by EDNET along with the designated room equipment. The compressed video equipment requires a special high-speed telephone line, T-1, for its connection into the EDNET network. EDNET will order the T-1 circuit through a Local Exchange Carrier and will extend the circuit from the school's telephone room to the classroom.

Further information is available on the Utah Education Network Gopher at **gopher.uen.org** or anyone can stop by and visit our WWW server at **www.uen.org**. Our Help Desk phone number is 1-800-863-3496.

DISTANCE TEACHER EDUCATION AT THE UNIVERSITY OF UTAH: AN EVOLVING MODEL

BY: JOAN SEBASTIAN

Rural school districts throughout the country regularly experience shortages of qualified personnel prepared to work with students with special needs (Berkeley & Ludlow, 1991; Helge, 1984). Utah is no exception, particularly in terms of the recruitment and retention of teachers prepared to serve students with disabilities. The need for qualified special educators in Utah's rural school districts is ongoing and critical.

In response to this shortage, the Department of Special Education at the University of Utah developed a distance teacher preparation program in two basic endorsement areas, mild/moderate disabilities and moderate/severe disabilities. The program is currently delivered in all four rural regions of the state. It has evolved over the past thirteen years to include the effective use of multiple distance telecommunications technologies.

The purpose of this chapter is to: 1) describe how the Department of Special Education delivers a teacher preparation program to rural regions of the state, 2)identify challenges and possibilities inherent in delivering preservice graduate education at a distance and, finally 3) discuss the implications of distance technologies for future educational activities in the College of Education.

TEACHER PREPARATION AT A DISTANCE

Background

Early in 1981, a rural special education director from central Utah approached the Department of Special Education with a request to bring to the district a preparation program for special educators. The local director had identified teachers willing to become trained in special education but unable to access the several preparation programs in the state because of distances and travel difficulties. With the assistance of a small grant from the Utah State Office of Education Special Education Section, the department began delivering teacher education on site in Gunnison, Utah.

Initially, instruction was delivered by faculty who drove weekly to the site. It became apparent after a very short time that this approach was too costly in terms of travel and faculty time. In 1985 the EDNET interactive television system came on line. Faculty in the Department of Special Education saw the possibilities for delivering coursework to rural sites over this system and began the development of a series of televised courses. Classes were broadcast to Roosevelt and Ephraim where two cohorts of teacher trainees were located. The live classes were also video taped during each

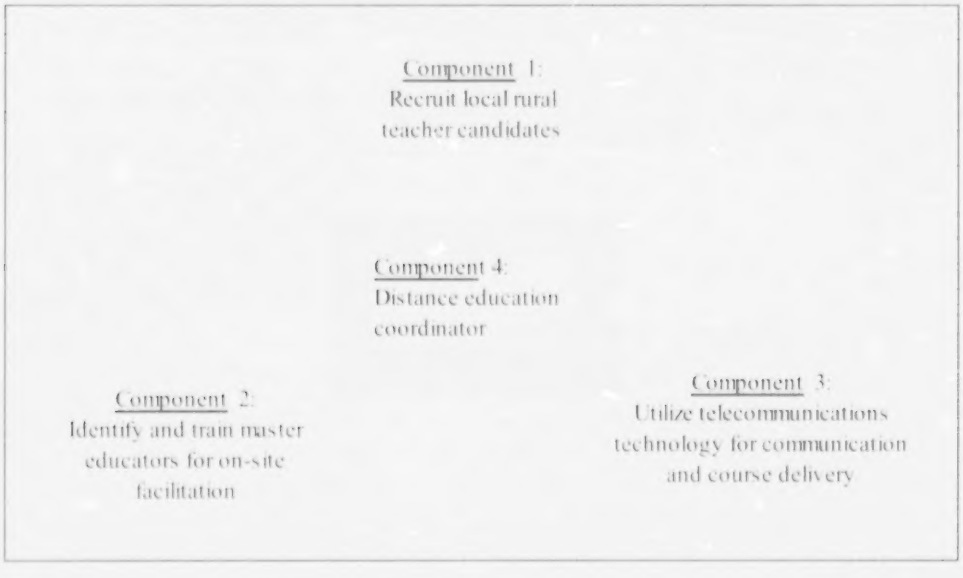
broadcast and packaged for distribution to rural sites with no access to the EDNET system.

Evaluation data gathered from the distance courses offered live over EDNET and on video tape revealed that there was very little difference in students' perceptions of the effectiveness of the two delivery approaches (Egan, Welch, Page, & Sebastian, 1992). In fact, distance students felt that courses offered on video tape provided more flexibility for them as learners. Scheduling time for each video course could be negotiated at the local site by the cohort of teacher trainees. In this way, the graduate classes could be offered weekly during times that did not conflict with school district and community activity schedules.

Program components

Using the evaluation data gathered during a six year implementation period a model for delivering teacher education at a distance evolved. The model, with its four basic components, provides a framework for the continued development of the Distance Teacher Education program for the Department of Special Education. The essential components of the model require that: 1) teacher trainees are recruited from local rural school districts and prepared at the local site; 2) master special educators from rural communities are identified and trained to provide local support and facilitation for the program; 3) available telecommunications technology is utilized to assist with the delivery of instruction and provide interaction with the campus faculty as well as other rural students; and 4) a distance education coordinator be designated within the department for the purpose of overseeing all activities and personnel involved in delivering graduate teacher education at a distance (Figure 1).

Figure 1
Distance Teacher Education Model Components



Recruiting teacher trainees from local communities was identified as an important alternative strategy for dealing with the ongoing problem of retaining qualified personnel (Marrs, 1984; Sebastian, 1991). Individuals who are already part of a local community tend to remain in rural regions following training offered in a rural school district (Lemke, 1995). Local special education directors assist the program coordinator by identifying possible candidates for the preparation program. When a cohort of six to eight individuals has been identified and local support provided the program begins. By recruiting and training locally, over 80% of the teachers prepared through this project are still teaching in their rural communities (Graduate Council Review, 1991).

Even with the video and audio interactive capability of the EDNET system and other telecommunications applications (computer, FAX, voice mail, etc.), students need on site support in order to receive immediate assistance with assignments, course activities, and requirements. Rural master special education teachers (the second model component) are identified in each region and trained on campus to assist with the teacher preparation program at each distance site. These distance education facilitators serve as an extension of the faculty and provide immediate on site support for students in the program. Having in place at each distance site a qualified facilitator is a both a unique and critical component of the distance teacher education model developed by the Department of Special Education. In order to ensure program quality, the Department will only offer graduate teacher preparation in rural regions where qualified master teachers have been identified and trained to serve as distance education facilitators.

The third component of the model focuses on the use of multiple applications of technology for the delivery of course content and the ongoing support of students at each rural site. Not all coursework is effectively delivered either over live interactive television or prerecorded video. For some courses, students need direct contact with the campus faculty. Using a combination of delivery approaches that exploit the best use of technology has proven to be most effective for program delivery. Computer communication applications (e-mail, computer conferencing, bulletin boards) are currently being developed to add additional opportunities for interaction between campus faculty and distance students.

The coordination of personnel and technology is provided by the fourth component of the model, a designated department level program coordinator. This position is held by a tenure track faculty member who is responsible for facilitating all distance education activities that are offered through the Department of Special Education. This includes, recruiting and advising distance students, identifying and training distance facilitators, coordinating video taping activities along with developing the EDNET schedule for broadcast courses, working with campus faculty as they develop courses for video and live broadcast, and managing budgets for both external and internal resources. The program coordinator is assisted by a clinical instructor who has the major responsibility

for supervision of field based activities and student teaching experiences at each of the distance sites.

The ongoing development and evaluation of the distance teacher education program in two certification areas has been supported over the years by several federally funded personnel preparation grants. Recently, following an assessment of the leadership needs in rural school districts the department sought and received approval from the University Graduate Council to offer in addition to certification a Master of Education degree at a distance (Esplin, 1994).

The graduate program is offered in several rural regions of the state. Distance sites are selected based upon the identification of a cohort of interested students, The recruitment needs of rural districts, and the identification of local facilitators. All four rural regions of the state are currently working with the Department of Special Education's Distance Teacher Education program.

Program delivery approaches

The Distance Teacher Education program utilizes multiple, integrated delivery approaches to provide graduate coursework and field experiences for students admitted to the program. Instruction is offered directly to each rural site as well as on the University of Utah campus using a combination of the following approaches:

1. Live on site: Some courses are offered on site by faculty from the Department of Special Education. Program developers determined that courses requiring hands on experiences (such as the course in educational assessment) were more effective when faculty traveled to the rural site to teach a cohort of students. Courses are offered on site in a rural school district using both "block scheduling" (students attend classes over several days) or a weekly instructional format.

2. Interactive television: A few classes are offered using interactive television taught live over the Utah EDNET system. Receive sites for the EDNET system are located in each of the rural regions of the state. Trained EDNET personnel along with the Department's distance education facilitators support these classes at each remote site. Access to the EDNET instructional system is scheduled a year in advanced by requesting a block of time for each of the three academic quarters.

3. Video tape courses: Pre-recorded video taped courses, identified in the department as "Professor Plus" are used most often to deliver courses in each rural site. With this approach regular on-campus courses are video taped in a studio with the professor and campus students. All required course materials are organized and packaged for delivery along with the video tapes to the distance site. A distance education facilitator (the "plus" of this approach) coordinates learning activities, leads class discussions, supports students' completion of assignments, communicates with the campus professor, and handles all program management tasks at the site. Distance education facilitators are trained in specific strategies for facilitating distance education courses and field based activities. Each "Professor Plus" class is also supported with interactive television

seminars broadcast over EDNET during the quarter the class is offered at the rural site. These broadcast seminars provide distance students with direct assess to the campus professor to ask questions, prepare for exams, and discuss course related issues.

4. Field based activities: All field studies and student teaching activities are supervised directly by university faculty at each distance site. Distance education facilitators (master special educators) from each of the rural regions provide additional supervision for students. As a result, students participating in the program, who are often teaching on "emergency authorizations" receive clinical support from both university faculty and distance facilitators directly in rural special education classrooms. In addition, field studies seminars are often broadcast over the EDNET system to bring together cohorts of students at several rural sites to discuss issues and problems encountered in their special education classrooms. This interactive discussion allows students to share information and receive additional support from their peers and university faculty.

5. Campus coursework: Distance education students come to the university campus for advanced graduate studies courses, graduate seminars focusing on rural special education service delivery issues, and courses in the allied field requirement area. Most of the campus experiences for these students occur during times when local school districts are not in session (during summer break and the first two weeks in July, for year round schools) as well as during scheduled Friday/Saturday time blocks. The campus experience allows time for faculty to meet with students to provide program advising, facilitate graduate committee meetings, as well as provide mentoring and other supportive activities. Housing and travel assistance for students has been provided by local school districts, the Utah State Office of Education, and when available, from federal stipends.

Program outcomes

Since the department began delivering certification and graduate instruction at a distance over 120 teachers have been prepared in special education throughout the state. In addition, many more educators have been able to update their skills by completing graduate courses in special education. In several of the rural regions where there is an emphasis on including students with severe disabilities in neighborhood schools, teachers endorsed in the area of mild disabilities have been able to complete courses in the severe endorsement program in order to gain additional skills for teaching this new population of students.

CHALLENGES AND POSSIBILITIES

Institutions of higher education throughout the United States are increasingly relying on electronic telecommunications technology as a means for delivering instruction to students who are geographically dispersed and/or place bound. The application of new

technologies, particularly in terms of offering instruction away from the university campus, has brought with it interesting challenges and possibilities that must be addressed at multiple levels within the institution. The next section of this chapter describes some of the challenges and issues in relation to distance students, university faculty and program administration. Possibilities and opportunities for addressing the challenges are also discussed.

Distance Students: Challenges and Possibilities

Several critical issues and problems impact students who learn at a distance. Beginning with admissions to a graduate program and continuing throughout their experience, students must be able to maintain meaningful contact and communication with campus faculty and administrative offices. Developing effective strategies to assist students at a distance with these interactions continues to challenge the department. Telephones, voice mail, EDNET, FAX, and most recently computer access via Internet help to connect distance students with campus faculty and resources. Students and faculty are able to utilize the FAX capability to send assignments back and forth allowing for more timely feedback on work. Voice mail and e-mail (over Internet) have allowed for even more efficient communication and interaction between faculty, distance facilitators, and students.

Another issue that has presented ongoing problems is the department's requirement for off campus distance students to complete the department admissions procedures. For most of these students this requires travel to a regional college or university center to complete graduate testing requirements. For campus students this process is somewhat easier simply because of their access to university resources and admissions support staff. In spite of these additional difficulties, over sixty (very motivated) graduate students participate annually in the distance program. By holding distance students to the same admissions requirements and standard, the department has reinforced the quality and hopefully the success of these students (Graduate Council Review, 1991).

In terms of student achievement there is a great deal of evidence that suggests students at a distance learn as well as students on campus in conventional courses (Moore & Thompson, & others, 1990). In recent years this research has focused particularly on delivery of instruction via telecommunications systems. Distance students completing certification coursework through the Department of Special Education do in fact maintain a grade point average that is equal to our campus students. Rural school district administrators have also reported their satisfaction with the graduates of this program. The achievement of the distance students has been and continues to be comparable to the campus students.

Student satisfaction with the delivery of courses via technology is another important factor in relation to the success of distance learning experiences. While, in general distance students evaluate the graduate courses offered in their region very positively, several thorny issues are yet to be resolved. Timely feedback on assignments that need

to be sent to campus for evaluation continues to be a problem. Recent use of FAX machines has helped to shorten the turn around time for these assignments. In the future, as more students are connected to the university and department via Internet, some assignments will be "e-mailed" directly to faculty for review and immediate feedback.

Another, possibly more challenging problem for graduate distance students, is convenient access to the University library system. Some students have been able to connect to the data bases at the university library, again via Internet, but report having difficulty acquiring requested resources quickly enough for use in assignments. The department is experimenting with an "in house" system for obtaining library resources. Work study students in the department have been assigned the responsibility of tracking down and copying or checking out requested items for distance students. In this way, distance students are able to bypass the inter-library loan service (which is already overloaded) and hopefully receive information in a more timely fashion.

Summary

Students who complete their special education course and field studies requirements on site in rural school districts throughout Utah are high quality graduate students and very successful teachers (Graduate Council Review, 1991). They are positive about their distance learning experiences and are very flexible in terms of some of the challenges described above. They have provided the department with useful feedback that has allowed program developers to resolve some of the problems distance students encounter. Distance students appreciate the opportunity to complete the requirements for an endorsement in special education within their local communities. As more individuals complete a Master of Education degree in special education at a distance, an increased pool of educational leaders and master teachers will impact the quality of services available for students with disabilities in rural school districts.

Faculty: Challenges and Possibilities

Faculty are obviously critical to the success of any graduate program, whether it is offered on campus or at a distance. Teaching at a distance presents additional challenges for faculty as they prepare their instruction. Identification of effective television teaching strategies can be found only recently in the literature (Dillon & Walsh, 1992). Never the less, faculty who teach at a distance are generally positive about their experiences and appear to be intrinsically motivated. Few incentives for faculty who teach using distance education technologies have been identified in the literature. Instructors often perceive that their efforts in distance education go unrewarded and are not valued as scholarly by their colleagues (Dillon & Walsh, 1992). Faculty who choose to become involved with distance education are intrigued and challenged by the possibilities offered by these new technologies. Nevertheless, on going involvement that goes unrewarded will probably result in faculty burnout and withdrawal from distance teaching.

Dillon and Walsh (1992) suggest that teaching at a distance requires different skills and behaviors of instructors. Faculty need to learn how to make the best use of the

technology that is available in order to personalize their instruction and actively involve students in the learning process. Critical television teaching behaviors identified by experienced distance education faculty include; developing detailed course syllabus, creating ways for distance students to interact, developing methods of providing feedback to remote site students, using good quality audio and visual materials, and becoming familiar with the technology used to deliver instruction at a distance (Wolcott, 1993).

Egan, Sebastian, Welch, Page, Nkabinde, & Jones (1993) after interviewing television instructors in Utah about their experiences identified several additional factors related to quality television instruction. The elements of quality instruction, from the perspectives of these instructors include: competent faculty skilled in their subject area and in presentation skills; meaningful interactions that occur between and among instructors, site facilitators and students; well organized and readily available support materials; effective collaboration between instructors, program planners and instructional designers; integration of multimedia into the distance program; and instruction that is responsive to student learning needs and which results in student achievement. These results suggest that faculty need preparation and training prior to teaching on television. Ideally, each instructor should have available an instructional design team to assist with course development and the actual implementation of the telecommunications course.

Summary

It is evident that faculty using any of the several technologies that are available for distance education need training, time and technological support. Additionally, if we hope to sustain faculty interest and recruit new distance instructors, meaningful incentives need to be identified for faculty who participate in distance teaching. The Department of Special Education at the University of Utah is currently grappling with ways to support and reinforce faculty as they develop and deliver special education courses at a distance.

Program Administration: Challenges and Possibilities

The Department of Special Education has addressed multiple issues over the years as the distance teacher education program has evolved. The areas of concern addressed in this section include challenges related to resources available for program development and maintenance, access to and use of technology, and programmatic issues related to both department and university policy.

Resources

Determining the cost effectiveness of distance education programs remains a difficult problem for institutions of higher education. Olcott (1991) notes that there are no definitive statements about the cost effectiveness of distance programs because of the variety of systems and the generally piecemeal implementation of distance education in colleges and universities. Additionally, many distance education programs are funded initially with external resources.

The Distance Teacher Education Program in the Department of Special Education at the University of Utah was funded in the early years entirely with external monies. As the program evolved, the Department of Special Education initiated efforts to stabilize the program by reallocating resources within the department.

Currently, the program is supported with both university resources and external funds. The department supports the project with a hard money faculty line designated for the administration of the program. Additionally, a portion of the tuition generated by course offerings is returned to the department to help with the ongoing program needs, such as video development, faculty travel, copying and mailing costs. The Utah State Office of Education, Special Education Section provides monies to assist with program activities specific to the personnel recruitment needs of several rural districts in the state. Fiscal support for facilitators and EDNET broadcast costs are supported by these resources.

Providing graduate instruction and teacher training at a distance adds additional costs to the campus based program. Travel, faculty time, and the use of technology all require resources not normally budgeted for . The cost sharing strategy, combining state and department resources, employed by the Department of Special Education allows for the continuation of the Distance Teacher Education program.

Technology

In order to successfully delivery a distance education program to rural school districts throughout the state of Utah, access to both interactive and video technological resources is critical. Scheduling interactive courses over EDNET has evolved from a series of phone calls by the project director to make sure remote sites were available to a complicated scheduling process requiring a formal proposal (submitted a year in advance) from each agency requesting time on the system.

Telecommunications technology in Utah today is a complex, multifaceted endeavor involving all levels of public and higher education. The establishment of the Utah Education Network (UEN), a consortium of K-12 schools, post secondary education, public television, state government, business and industry, is an effort to bring together agencies with an interest in the application and coordination of telecommunications technologies. UEN also facilitates the coordinated use of several telecommunications delivery systems including, KUER Channel 7, KULC Channel 9, EDNET and UtahLink (Kucera, 1994).

With so many players involved in the delivery of distance educational offerings, coordinating the special education distance program has become much more complicated. Careful planning with each of the distance education sites, housed in rural school districts, is an ongoing activity. Not only must students be notified of course offerings, time and location, but distance facilitators and building administrators must also be involved in the planning.

In addition to the live interactive broadcasts facilitated through EDNET, Instructional Media Services (IMS) at the University of Utah supports the development of pre-recorded video taped courses. Coordinating studio time and production staff to develop courses for off campus delivery is another aspect of the use of technology for distance teacher education. IMS in cooperation with production services offered through UEN provides technical support for faculty developing video taped courses for the teacher education program.

Without the support of the technological services described above the Department's distance education program could not operate. This kind of support requires ongoing communication and coordination with multiple entities. While this is a challenge for the administration of the program, it is also a critical aspect of its success in delivering instruction for teachers off campus.

Program

Most distance education programs began as experimental off campus programs. Initially, the intent in most cases was to respond to identified needs in rural communities. As programs developed, issues related to the quality of students, the quality of the program itself, and university requirements and regulations surfaced.

The faculty of the Department of Special Education decided early on that the students admitted to the distance education program must meet the same admissions requirements as the campus students. Additionally, the faculty in the Department of Special Education stipulated that the program offered off campus must be congruent with all of the requirements, activities and competencies of the campus program. Attending to these quality factors during the development of the program resulted in the awarding of program approval from the University Graduate Council and the Board of Regents.

Another issue that became a critical problem was the graduate program residence requirement. During the early years of program delivery, the Graduate School of the University expressed skepticism about both the quality of televised courses and the requirement for students to complete over 36 hours in residence on the university campus for a Master's Degree. The Department of Special Education provided evidence of both the quality of distance students, their performance in the program and the quality of the program itself, in order to convince the Graduate Council that an alternative view of the residency requirement was in order for this program. Currently, distance students spend one or two summer sessions (two week blocked courses) on campus in order to fulfill an alternate residency requirement. The faculty in the department of Special Education allow for time during this blocked summer session to meet with distance students for advising and coordinating graduate programs.

Because the Department of Special Education has been a pioneer in the delivery of distance teacher education around the state, we have also been involved in the development of new university policy and procedures for the approval and implementation of future off campus programs. A report submitted by the university

wide Distance Learning Committee in 1993 resulted in the creation of a Distance Learning Directorate which reports to the Vice President for Academic Affairs. The Distance Learning Directorate is in the process of developing specific quality guidelines for distance course and program offerings (Committee report on distance education at the University of Utah, 1993). Currently, the department's distance education coordinator serves on two subcommittees for the Distance Learning Directorate.

Summary

Several program administration issues must be addressed for the successful implementation of any distance education program. In some instances, delivering course work off campus via technology may be viewed as cost effective in terms of building new facilities. Delivering teacher preparation instruction off campus may be an effective solution to the critical shortage of qualified special educators, but it appears to require the combined resources of the school districts, State Office of Education and the Department of Special Education.

The coordination and application of technology for use in the delivery of distance education programs requires a great deal of attention, particularly as systems become more and more complex. Thoughtful utilization of appropriate technological applications will ultimately be more cost effective and user friendly for distance students. As we have learned, sometimes less sophisticated technology (video tapes, voice mail, telephone conferences) are as effective as the more "high tech" two way interactive systems, and much less costly (Egan, et al., 1992).

Attention to issues of program quality during the development of alternative (distance) programs may result in the ultimate institutionalization of the program. Maintaining a focus on both quality and the personnel needs of rural school districts has resulted in a successful model distance education program.

IMPLICATIONS AND RECOMMENDATIONS

The College of Education is well position in today's technological climate to become actively involved in Governor Michael Leavett's vision for distance education (Esplin, 1994).

1) Make education an activity not bound by buildings, place or space;

2) Go beyond distance learning to a new level, making technology-delivered education a part of every student's educational experience; and

3) Pick up the pace in education (by making better use of the later high school years to help students get a jump on college) (p. 29).

The Department of Educational Administration is reaching out to several rural school districts in an effort to prepare much needed qualified school administrators.

Other departments and programs within the college are also poised to tap into the possibilities offered by the available telecommunication technologies.

While the opportunities and the technology are clearly available in the state, caution in the application and expansion of distance educational offerings is in order. Implementing off campus programs is costly, in terms of the technology and faculty resources. Funding sources, both internal and external, need to be developed prior to extensive expansion of program offerings. Support and training for faculty involved in the delivery of preparation programs at a distance must be developed. An aspect of support for faculty, maybe even more critical than fiscal support, is the provision of released time for course development (Egan, et al., 1993). Additionally, faculty need access to technological expertise and training as they attempt to deliver instruction off campus. As more faculty become involved in distance education, the value of these efforts must also be recognized for the purposes of retention, promotion and tenure (RPT). Departmental RPT committees will need to develop appropriate means for recognizing faculty for the time and creative application of distance education delivery options.

Coordinating distance educational programs from the College of Education will become a critical need as the college expands its offerings. Coordination must occur within the college to ensure that duplication of courses and information does not occur. In addition, coordination with local and rural school districts is also required in order to identify and appropriately address pressing personnel development needs. The creation of a college level distance education coordinator may well be required if all four departments within the college choose to become involved in delivering instruction at a distance.

There will be multiple challenges as well as opportunities in the future as the College of Education looks to implementing distance educational programs to rural regions of the state. The benefits in terms of applying new technologies in the exchange of information and knowledge cannot go unstated. The opportunity to work with educators in rural communities around the state over the years has enhanced campus based programs within the Department of Special Education. The exchange of experienced based knowledge between rural and urban teacher trainees has been positive for everyone involved.

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ESTIMATING THE PRICE TAG:
WHAT DOES AN EDNET COURSE COST?
BY DONALD C. GREN

EDNET, in Utah, is a two-way television system for linking two or more classrooms. The State's institutions of higher education and public schools are rapidly installing these systems and plan to have at least one in each high school and institution of higher learning by the end of 1998. Their objectives are to increase access to higher education for all Utahns and maintain "world-class" quality at reasonable and affordable cost. (Leavitt 1993, Foxley 1993)

The objectives of this study were to 1) determine what resources were present in EDNET classrooms, 2) identify the people who are involved, and 3) estimate the difference in cost between EDNET and the traditional system of having an instructor in each classroom.

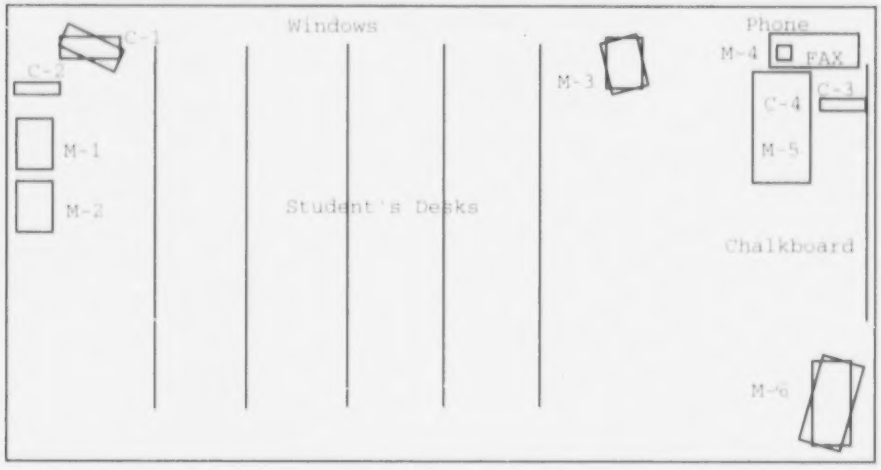
An undergraduate EDNET course utilizing three classrooms, at three sites, was studied. There were two distant/remote classrooms, each approximately 20 miles from the main campus classroom. The remote classrooms were at branch campuses. The instructor was interviewed, informal discussions were conducted with the other staff involved, student evaluations were examined, and observations of five 50 minute class periods were made. Two observations were made in the main classroom, one in each of the remote classrooms, and another in the video control room. Documents from the Utah System of Higher Education (USHE), Governor Leavitt's office, and the Utah Education Network (UEN) were used in developing the economic data.

This presentation begins with a description of the furnishings and technology in the classrooms and control room. Next the people involved are identified at each of the sites. Following this is a break-even analysis comparing the additional costs of EDNET to the savings achieved over conducting the remote sites as traditional classrooms with an instructor in each. I then report my conclusions and identify questions that remain unanswered because of the limited scope of this study.

The Main Campus Classroom

Class sessions were generally broadcast from the classroom, as shown in figure 1. A broadcast quality video camera (C-1) was mounted on a tri-pod in the left rear corner of the room. Two cameras, one in the back (C-2) and one at the front (C-3) were mounted on the walls. A fourth camera (C-4), mounted in the ceiling over the teaching station, served the purpose of an overhead projector. The image from this camera could be seen by the operator on a small monitor (M-4) located on the table next to the teaching station. The image could also be transmitted to other monitors in the room and broadcast to the remote sites. A fax machine was also on the table.

Figure 1
Main Campus EDNET Classroom.



Two 27 inch television monitors (M-1 & M-2) were hung on the back wall near the ceiling. The view being transmitted to remote sites was shown on one monitor (M-1) and the view being seen from a remote site was shown on the other (M-2). Another 27 inch television monitor (M-3) was on a cart near the front facing the students' desks. The view being seen from a remote site was also shown on this monitor.

A Macintosh, Windows compatible, computer with a 14 inch monitor (M-5) was installed in a specially constructed oak teaching station. A 40 inch Barco monitor (M-6) which was mounted in another specially constructed oak cabinet in the front corner of the room opposite the teaching station. This monitor could be used to display the computer screen, the view from the overhead projection camera, a video being played from the control room, or the view from a remote site. Only one remote site could be viewed on any of the monitors, in the room, at one time. Six microphones and two air conditioning units were visible on the ceiling.

There were seventy student desks in the room. Large heavy curtains were drawn across windows along the entire left side of the room during the broadcasts. The lights were left on during the broadcasts. Specially constructed sound deadening cloth covered panels, with oak edging, were on the rear and wall opposite the windows. The room was otherwise typical of a classroom with a chalkboard, vinyl floor tiles, metal doors, and sound absorbing ceiling tiles.

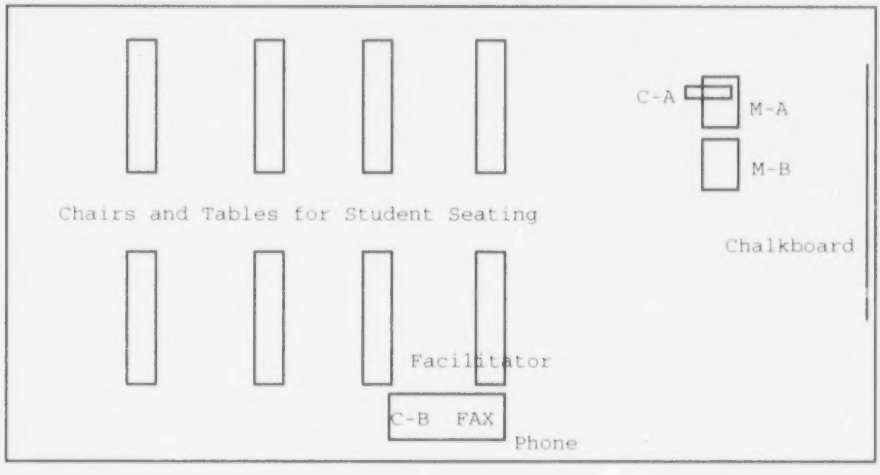
The Remote Classrooms

Figure 2. shows the general configuration of the remote classrooms. Each had two 27 inch television monitors (M-A & M-B) at the front of the room. One monitor (M-A) was used to show the view being broadcast from the main site classroom or from a remote site. The other monitor (M-B) showed the view that was being broadcast, typically of the students sitting at the tables. The monitors were sitting on a stand that

housed the codec (compression decompression) equipment that converts the analog video signal to digital for transmission over high speed (T-1) telephone lines. A video camera (C-A) was mounted on top of one of the television monitors in each room and could be controlled remotely from the facilitator's table.

Microphones with switches, allowing the students to turn them on and off, were located on tables in each classroom. Chairs provided the seating for the students at the tables, rather than desks. An Elmo (C-B) (video projection table) for showing documents on the monitors, telephone, FAX, computer keyboard, and control tablet with mouse-like pointer were located on the table where the facilitator sat.

Figure 2
Remote EDNET Classrooms.



One of the remote classrooms had no windows and the other had lighter curtains that were drawn, effectively keeping the glare of the sun out. The lights were also kept on in each room during the broadcasts. The rooms appeared similar to the main classroom with respect to floor covering, ceiling tile, etc.

The Control Room

This was a small room with video monitors, VCRs, telephones, a computer, and video and sound switching equipment used to control which video signals are being broadcast on the monitors in the classrooms. The signals are transmitted and received from the remote sites at the Utah Education Network (UEN) facility on the University of Utah campus where the compression and decompression of the signals occur.

The People Involved

The following is a list of the individuals observed throughout the study. Site 1 refers to the main campus; 2 and 3 refer to the remote sites.

- Course instructor
- Manager for video production

- Technician in control room
- Site 1 camera operator
- Site 2 manager
- Site 2 classroom facilitator
- Site 3 classroom facilitator
- Students at sites 1, 2, and 3

The camera operator at site 1 or control room technician arrived at least a half hour before the classes began, to turn on and test the equipment. A remote site was generally seen on one of the classroom monitors at least several minutes before the instructor started the class. Test patterns showing the educational television station logo were seen on the television screens prior to the remote sites being connected.

The instructor wore a small clip-on wireless microphone which worked well, based on my observations from the remote sites. The camera operator kept the camera focused on the instructor as the instructor moved about the main classroom. The camera operator also ran the fax machine or dealt with any technical difficulties in the room. The camera operator adjusted the volume on the Monitors, discussed connecting a cassette player to the system for the instructor, and turned most of the equipment on and off in the room. The control room technician performed these duties on one occasion when the instructor visited a remote site and the camera operator wasn't in the classroom.

A facilitator was in each of the remote classrooms during the broadcasts. These facilitators turned the equipment on and off and adjusted it, answered the phone, received faxed documents which they then generally photocopied for each of the students, and were available should the students or instructor need anything. The facilitators either watched the monitors with the students or read until needed.

Two students were observed at each of the remote sites. Three students were listed on the roll at one site and two at the other. About forty students were in the main classroom. The observations were conducted on Fridays and the class also met on Mondays and Wednesdays.

Only one other classroom could be seen at a time in any of the classrooms. The main classroom and one remote site could be seen in the control room. The remote site, where someone had spoken last, was generally the one shown. The two television monitors in each of the remote classrooms usually showed the instructor on the left monitor and what the camera, in their own classroom, was focused on was shown on the right monitor.

Only being able to see one other site at a time means the instructor and the students are never able to see all of the other individuals at one time and then only those that the camera operator and control room technician have decided to show. The view that was typically shown to remote sites was the instructor and the remote classroom, where a student had spoken last, was typically shown in the main site classroom. The control room technician manually switched the site being shown on the monitors when someone

at another site began to speak. Occasionally there was confusion as to which location the new speaker was at and a view of them took a while to appear.

The instructor visited each of the remote sites once during the term and taught the class from there. The instructor sat with the students so that students at the other sites would be able to see the students too. The control room technician explained that the camera on the Elmo could have been used, but that it is not a very satisfactory solution and indicated that this is why they had the tri-pod and wall mounted cameras at the main site.

Group exercise sheets were occasionally faxed to the remote sites and materials were also sent between sites by courier. The camera operator and facilitators operated the fax machines and the facilitators got the materials to and from the courier. Occasionally courier deliveries were late and faxing of documents took time.

The manager for video production had a desk in a room next door to the control room. The camera operator usually reported problems or asked questions to the control room technician and the control room technician went to the manager for video production for help.

The manager at site 2 explained that quite a few courses, with instructors in the classroom, are offered at that site and are either taught by part-time faculty or full-time faculty who drive out from the main campus. These courses are offered through the Division of Continuing Education.

The Economics

"The State plans to implement two-way video conferencing classes [EDNET] for 90 common core college/university courses. This should reduce demand for buildings and support facilities for higher education (bricks and mortar) allowing significant cost savings. Also, video conferencing college level classes will be available to high school and other students and allow them to take college courses throughout the state, saving money for both the student and the State of Utah." (Technology 2000)

The third objective of this research is to estimate the difference in cost between EDNET and the traditional system of having an instructor in each of the three classrooms. The quote, above, indicates that significant cost savings will accrue to the student and State. Break-even analysis is often used in comparing the cost of two alternatives that can be used to accomplish the same objective.

Break-even analysis requires the amount of unique fixed and variable costs associated with each alternative. Fixed costs are one-time investments that must be made before production can commence. Classrooms and technology are examples of fixed costs. When both alternatives require some of the same fixed costs, these costs can be ignored (i.e. chairs, desks, classroom, custodial services, etc.) for purposes of comparing the two alternatives.

No additional fixed costs would have been required for the traditional classroom, with an instructor in it, that were not also required using EDNET. The EDNET

classrooms, however, required considerable additional investment in fixed costs. That investment consists of teleconferencing equipment primarily, and for classrooms, like the ones observed in this study, the State is budgeting $150,000 to upgrade the one at the main site and $50,000 at remote sites (Foxley). Additional costs may have been born through the institution's own overhead, which would have increased these costs, but they have not been estimated in this study. For example another EDNET classroom upgrade, similar to the main classroom observed, was said to cost approximately $200,000 (discussion with SLCC staff). For the three classrooms observed in this study, $250,000 ($150,000 + $50,000 +$50,000) for EDNET installation would appear to be a conservative estimate on the low side.

In addition to fixed costs, variable costs are required to perform a break-even analysis. Variable costs are associated with how much is produced, whereas fixed costs are one-time up-front costs required before production begins. In the case of a traditional classroom, variable costs include the cost of the instructor, photocopying charges, etc. The cost of the instructors in the remote classrooms was essentially the only variable cost being saved with EDNET. All of the other traditional classroom variable costs were required for both alternatives.

Using the EDNET option required additional variable costs to be incurred. A facilitator was required at each remote site. The charge to departments using EDNET, for the facilitators, is reported to be $13.50 per hour for each one. The camera operator and control room technician were also required, and their reported cost to departments is $30 per hour each (based on statements made by EDNET staff).

Telecommunications charges vary depending on distance between the sites and capacity. The two remote classrooms used dedicated high-speed digital (T-1) telephone lines which are reported to range in cost from $4,800 to $18,000 per year, not including set-up and equipment charges (Technology 2000). Based on the January schedule for the main classroom, broadcasting averaged approximately 6.25 hours per day, six days per week. If we assume this level of usage occurred at each of the remote sites for the ten weeks of the quarter and for four quarters per year; 1,500 hours of transmission time per year would occur for each remote site. If the annual cost of a T-1 line is $6,000 the cost per hour would be $4. An estimate of $4 per hour per remote site would seem conservatively low for a T-1 line that is essentially the equivalent of 24 regular telephone lines.

Other variable costs, like those for the manager of video production, the costs of UEN that are used to support EDNET, and all other costs that have not been accounted for would usually be classified as overhead costs. The UEN budget reported in 1994 was a little more than $4.5 million. Approximately 5,000 hours of EDNET programming and 8,000 hours of programming for KUED & KUER was reported. Simply dividing the UEN budget by the hours of programming yields nearly $350 per programming hour. This estimate may not be accurate depending on how much of UEN's resources are

utilized in supporting EDNET. The overhead cost, however, would not be insignificant considering all of the training for faculty and staff, development of materials and preparation, and other overhead at each institution and at the state level being expended to support EDNET in addition to some portion of the UEN budget.

Adding the hourly cost of the two facilitators ($27), the camera operator and control room technician ($60), the telecommunications cost for the two remote sites ($8), and the overhead would give us the variable cost to operate EDNET per hour, for the three classrooms. A similar service, that is available commercially, is Video Conferencing at Kinko's copy centers. The cost for three locations would be $630 per hour. The charges are $150 per hour for each of two sites and $210 per hour for each of from three to seven sites. The equipment appeared very similar to that in the remote classrooms observed. EDNET staff also indicated that the cost to use the system for a class is about $200 per hour.

The only savings for the EDNET course, observed in this research, came from not having an instructor at each remote classroom. Undergraduate courses, such as these, are taught by full-time and part-time adjunct faculty. Using more than 50% part-time faculty is generally prohibited by accreditation organizations. Assuming that full-time faculty teaching undergraduate courses average $45,000 in total compensation (USHE 1994-95 Data Book) and teach 15 credit hours for each of three quarters, their cost per classroom hour would be $100. This assumes the instructor performs no other service for the institution, which would rarely be the case making the $100 estimate high. Compensation for part-time adjunct instructors, of undergraduate courses range upward from about $20 per hour, on the Wasatch Front (based on 1994/95 compensation for Salt Lake Community College (SLCC) adjunct faculty).

If there had been instructors at the remote sites and one was full-time and the other part-time, it would have probably cost some amount between $120 and $200 per hour for them to teach the students in those classrooms. The ratio of full-time to adjunct would be two (includes the full-time instructor who taught using the EDNET system) to one. I will use three hypothetical compensation values ($120, $160, $200) to compare the hourly saving from not having instructors in the two remote classrooms to the cost of EDNET.

The variable costs of EDNET are estimated to be $95 per class hour ($27 + $60 + $8, see p. 12) not including overhead. If overhead was $25 per hour, the additional cost to use EDNET would be $120 per hour ($95 + $25). If instructors could have been hired for $120 per hour then EDNET would not save any money and would have the disadvantage of the fixed cost investment of $250,000. If it would have cost $160 to hire the instructors, there would have been a $40 per hour savings that could be applied to the fixed costs yielding a break-even point of 6,250 hours ($250,000 _ $40 per hour). This would be about 4 years of programming given the 1,500 hours per year estimated earlier. Had the instructors cost $200 per hour the hourly savings would be $80 and the break-even point would be about two years.

If overhead were $65, and instructors could be hired for $120 per hour then using EDNET would cost an additional $40 per hour [($65 + $95) - $120] in addition to the fixed cost investment of $250,000. If it would have cost $160 to hire the instructors variable costs would be the same and EDNET would have the disadvantage of the fixed cost investment of $250,000. Had the instructors cost $200 per hour the hourly savings would be $40 and the break-even point would be about four years.

If overhead were $105, and instructors could be hired for $120 per hour, using EDNET would cost an additional $80 per hour [($105 + $95) - $120] in addition to the fixed cost investment of $250,000. If it would have cost $160 to hire the instructors then using EDNET would cost an additional $40 per hour [($105 + $95) - $160] in addition to the fixed cost investment of $250,000. Had the instructors cost $200 per hour then the variable costs would be equal and EDNET would have the disadvantage of the fixed cost investment of $250,000.

My objective has been to come up with ball-park estimates and to develop a framework for comparing the costs of the EDNET system to traditional classrooms with an instructor in each. More accurate values, for these estimates, may become available at which time this method of analysis could again be used.

Conclusions

The EDNET classrooms observed required a lot of sophisticated technology that traditional classrooms generally don't have. This included television monitors and cameras, microphones, FAX machines, telephones, video over-head projection systems, high speed video telecommunications links, video compression/ decompression equipment, and control equipment used by the technicians.

The additional people required included a camera operator and control room technician at the main site, facilitators at each of the remote sites, the manager for video production, and the associated staff at the UEN (Utah Education Network). Significant effort is also being expended at the State and institutional levels to maintain and operate this system. This includes development of programming, faculty recruitment and training, etc.

My break-even analysis is inconclusive as to whether the cost of EDNET was greater than hiring additional instructors to teach at each of the remote sites would have been. This occurred because I have been unable to determine a value for overhead costs and faculty costs. Comparison using the cost of Kinko's video conferencing ($630 per hour) and the cost of using two full-time faculty ($200 per hour) would indicate that live instructors are less expensive.

The statement that EDNET will reduce the need for "bricks and mortar" has been refuted given that the same number of classrooms were required for the three EDNET classrooms, as would have been used with in-class instructors. Also, the fact that four individuals (two facilitators, a camera operator, and control room technician) were required to replace the two instructors and that significant effort and resources are being

expended by the institution, State, and UEN to support EDNET leaves us to wonder whether EDNET saved the State money for this course.

Some might argue that EDNET is better than having an instructor in each classroom and should not be expected to save money. Egan, et.al. (1992) investigated the EDNET system compared to the Conventional Instructional Delivery System (Traditional classroom with an instructor) and found that EDNET was ranked significantly lower in six of their ten evaluation variables. Assuming EDNET is not preferable to having an instructor in each classroom; cost savings seem essential to justify its use, at least beyond experimentation.

A more detailed cost analysis for the different applications of EDNET should be conducted given the findings of this study particularly with the stated objectives of the State to save money and reduce the need for "bricks and mortar".

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THE UNEASY BALANCE IN UTAH HIGHER EDUCATION: SYSTEM GOVERNANCE VERSUS INSTITUTIONAL AUTONOMY

BY L. JACKSON NEWELL & KATRINA GREEN

Introduction

Orchestrating a state-wide system of higher education is a task quite different from supervising Utah's system of public schools. Every school district has essentially the same charge and it draws from a common heritage of public instruction in the United States. By contrast, the nine colleges and universities in the Utah System of Higher Education (USHE) have several distinct charges that arose in three separate historical epochs and represent different streams in American culture. Research universities, four year liberal arts colleges and universities, and community and junior colleges do bear some of the same responsibilities, but each type of institution arose in response to a distinct set of societal demands. Their purposes and prospects are not the same, and if they were to be treated alike their collective educational, social, and economic roles would be diminished.

To save tax dollars, eliminate wasteful duplication of academic programs, and facilitate student transfers from one institution to another, independently governed public colleges and universities were brought together in coordinated state systems of higher education in the decades following World War II. The heterogeneous missions and unique traditions of each college and university made this process an inherently messy task in each of the fifty states.

Utah bound its nine public higher education institutions together in a single system under a common Board of Regents in 1969. The Utah System of Higher Education placed all three kinds of higher education institutions under one governing board, rather than create three separate boards for the universities, the four-year institutions, and the two-year colleges--as was done in California. Contrasting with the California model in another way as well, Utah did not integrate the two research universities, the University of Utah and Utah State University, as one institution, but preserved their separate identities, maintained their presidencies as direct appointees by the Regents, and provided them with their own boards of trustees. Thus, the Utah System of Higher Education is more unified in one respect (all institutions under one Board of Regents), and less unified in another (each institution maintains its own identity and governing board) than is the case in states like California and Minnesota.

No pattern for creating a state system of higher education has been without its problems. The Utah approach has posed two inherent difficulties. First, though community colleges, four-year institutions, and universities serve very different roles in education and society, there is a tendency for the Regents to treat them alike and therefore to moderate the diversity within system.

Second, by leaving the two research universities as separately governed institutions, the task of coordinating their academic programs was left to system-wide administrative officers and board members who are far-removed from the daily rhythms of teaching and research. This design poses serious difficulties because in major universities academic programs are governed chiefly by faculty through academic senates. In a unified system like the University of California, a system-wide or multi-campus academic senate makes broad academic policies, coordinates academic programs, and monitors academic quality. The University of Utah and Utah State University faculties have no mechanism by which to participate in common governance. Yet USHE administrators and regents who do coordinate these universities and their programs lack the specific expertise and authority to carry out these functions effectively.

Problems Inherent in System Governance

Given this backdrop of system organization and governance problems in the State of Utah, we struggle to serve competing ideals for higher education: academic program excellence, broad public access, and efficiency in resource allocation and use. In recent decades, USHE seems to have favored broad public access (however imperfectly) at the expense of academic excellence. Institutions of higher learning across the country as well as in Utah are wrestling with multiple and competing public demands for expanding student access, improving the quality of the undergraduate experience, increasing the use of the electronic technologies that have transformed computing and communications, and, with all of this, expecting colleges and universities to get along on a decreasing proportion of the public treasury.

One of the significant effects of these mounting pressures on higher education has been a shift in the balance of power from the traditional academic-professional authority of campus faculties to the legal-public authority of the Board of Regents and the Higher Education Commissioner's Office. Over its twenty-five year history, USHE has become more central to higher education governance and policy making, while the academic senates of the colleges and universities have become less central to these processes.

Our aim is to shed light on the evolving relationship between the state system and its nine colleges and universities. We will do this by examining five important policy issues that illustrate the challenge of seeking greater system coordination while preserving the principles of faculty governance and institutional diversity in Utah higher education.

The five issues we selected are not the only ones that illustrate important governance problems, but we chose them because they represent the breadth of governance problems in USHE and they range from challenges present at the system's founding to those that could not have been anticipated then, but which have become important in the 1980s and 1990s: (1) institutional role assignments and quality control, (2) the debate over competing academic calendar systems, (3) student credit transfer articulation, (4) concurrent enrollment, and (5) the initiative to increase the use of emerging instructional technologies.

We have studied the history and character of each of these issues and we will present and discuss them separately. But we have also looked at the five as a whole, and we will conclude this chapter by offering observations on the governance of public higher education in Utah.

Institutional Role Assignments and Quality Control

An institution's role assignment defines the academic programs it provides. For its first two years, the Utah System of Higher Education did not have a policy governing these assignments. In 1971, however, the Board of Regents adopted and began implementing a policy to monitor and regulate academic program changes at each institution. The Board claimed the authority to approve new academic programs, as well as proposed additions or changes in existing programs.

The review policy was designed to (1) define institutional role assignments (the degrees and programs the institution is authorized to provide), (2) monitor the quality of academic programs, and (3) prevent unnecessary or wasteful duplication of programs within USHE. These provisions were also intended to assure that academic programs essential to the advancement of Utah's citizens and economy were offered at least somewhere within the Utah System of Higher Education.

As USHE implemented its review policy, program essentially and quality monitoring were emphasized, but the prevention of unnecessary program duplication has not been carried out effectively. In 1978, Deputy Commissioner of Higher Education, C. Leon McCarrey, stated that he "generally agreed that the major purpose for reviewing instructional programs is to isolate those not meeting certain minimum criteria and to determine by further study if the services they provide are sufficient to merit retention" (Utah State Board of Regents, Minutes, April 1978). Dr. McCarrey suggested a two-step review mechanism that consisted of a screening process to identify programs most likely to benefit from review and a thorough assessment process for the programs that were selected.

The chief criterion for selecting academic programs for review was the number of graduates they produced over a three years period. Doctoral programs were required to average two graduates per year or face review, master's programs were to have five graduates if affiliated with a doctorate program and three graduates otherwise, and bachelor's programs were to have at least five graduates. Associate degrees and certificates were to produce seven and ten graduates respectively. If an academic program had been in existence for three years and did not meet the above productivity standards, it would be required to undergo review.

Instructional program reviews were conducted at the request of the Commissioner, but they were carried out by the institution itself. Reports of the reviews were submitted to the

Commissioner who used them as the basis for action recommendations to the Board of Regents. Recommendations were to fall into one of three general categories: continuation, probation, or termination of program.

A crucial provision of the review policy was an assurance that money liberated as a result of program elimination or reduction would be retained by the home institution for use in enriching existing programs or launching new ones (Minutes, May 1978). Without this safeguard, colleges and universities would be tempted to hedge their reports in an unreasonably positive direction to save marginal programs and the money associated with them. With this provision, however, they would have incentive to cut weak programs and reinvest the resources in more promising ones.

USHE's academic program reviews were received with mixed reactions by faculty and administrators on the nine campuses. Although the Board sought to keep program selection from becoming politicized, and selection for review from becoming a stigma, nothing could prevent the perception that there must be something awry if a program were tagged for examination.

The review process presented other concerns as well, as Commissioner McCarrey reported to the Regents in July of 1980:

> If the desired result of using program reviews to improve quality education in our state is to become a reality, it must be for the right reasons. If it is perceived by faculties, students and administrators to be solely for the purpose of budgetary constraints and other emergency considerations, then it will have little value and nominal institutional support (McCarrey, Minutes, July 1980).

Quality improvement was to be the emphasis in the review process and McCarrey went on to propose a major change to achieve this end. The Board, he said, should broaden the scope of its authority and review all academic programs :

> [I]n the context of the preceding and in the spirit of re-examining the mechanism for reviewing low-producing programs, there appears to be real value in proposing a "cyclic" process which would require that all programs within departments at all nine institutions be reviewed on a rotational basis every five to seven years, . . . Such a procedure would assure that all programs, not simply low-producing programs, are carefully and thoughtfully examined periodically (Minutes, July 1980).

The Associate Commissioner's approach was designed not only to increase educational quality, but also to combat negative connotations associated with being chosen for a program review.

Within these guidelines, review committees were to consider the transferability of academic credits earned in the program. The quality emphasis continued when program review policies were revisited in 1985. At the time, Regent Reba Keele emphasized the importance of four dimensions of program reviews:

1) Increased concern for programmatic quality,
2) Increased emphasis on accountability for outcomes,
3) Development of budgeting strategies designed to cope with limited resources, and
4) Perceived need to modify existing academic programs and develop new initiatives (Minutes, December 1985).

The Board did not set out to use program reviews to get at fiscal issues but money had become a factor in the review process. The state treasury was severely limited in the mid-1980s, and no public program or policy could ignore this reality.

Financial concerns became a major factor in defining an institution's role assignment. In 1986, the Regents issued a moratorium on the approval of any new programs that would require new state funds or alter assigned institutional roles (Minutes, May 1986). Two years later, concern over long-range financial projections again prompted a reevaluation of program review policies. This reevaluation led to an expansion of the scope of program reviews to include two new dimensions: students' satisfaction and contributions to the welfare of the community (Minutes, October 1988).

Dr. Reba Keele, currently Dean of Undergraduate Studies at the University of Utah, reflected recently that institutional role assignments have not been upheld. "There are duplicative programs everywhere. The Board has the ability, through its established policies, to enforce role assignments but has not done so" (personal interview, December 20, 1994). It can be argued, at least, that USHE officials soft-peddled their more natural coordinating roles, while moving increasingly into matters that the separate institutions were better suited to manage on their own through faculty governance and academic administration.

Academic Calendars: Quarters v. Semesters

The seemingly endless debate over whether the Utah System of Higher Education should adopt a common academic calendar--and if so, which one--is fueled by a variety of concerns. Student transfer articulation and concurrent enrollment programs pose two of them: students increasingly transfer academic credit from one institution to another. This process is cumbersome and sometimes diminishes credit as a student's work earned under one academic calendar system is converted to another. Similarly, faculty and students associated with various concurrent enrollment programs often face the difficulty of simultaneously teaching or taking courses under academic calendars that begin and end at different times.

The pros and cons of the two calendar systems add up to a remarkably even balance. The semester system provides half again as many weeks for sustained study of a subject, while also reducing the number of registration cycles by one-third--to two per academic year. The quarter system, on the other hand, provides more course options throughout the academic year and greater flexibility for students' course schedules. Other advantages and disadvantages are less substantial but worthy of note: a semester system gets students into the summer job market a month earlier, but forces them to return to

school before the summer season is over. Under the quarter system, students remain in school until after Memorial Day, but can continue to work until late September.

These rival calendar systems have vied with one another for most of the twentieth century. Since 1980, the national trend has been toward semesters; the vast majority of colleges and universities now use that calendar. Whatever the merits of each system, and its variations, there is good reason to believe that switching from one to the other (1) necessitates a thorough review of the curriculum and (2) requires additional funds during the transition. The curricular stimulation precipitated by switching from one system to the other is significant enough to have caused at least one veteran faculty member to suggest a policy of oscillating automatically back and forth between the two every seven years.

Beyond the nearly-balanced argument that academic calendar debates often come down to, there are more fundamental questions raised by the issue. Who has the right or possesses the wisdom to make the judgment? Does the authority rest with the academic senates of the separate institutions or with the state Board of Regents--or even with the state legislature? These questions are not trivial, nor are they easily resolved.

Until the early 1970s, academic calendar arguments took place largely within the boundaries of a single college or university campus and were generally settled by academic senates. With increasing student mobility, however, ease of credit transfer became a serious issue and the advantages of a state-wide calendar for public higher education weighed more heavily in the minds of USHE officials. Consciousness of steeply rising costs of higher education in the 1990s has also tipped the scales in the direction of the semester system. The rationale is that registration processes are costly and money can be saved in the long run by doing it twice rather than three times each academic year. The last decade has seen mounting tension over many facets of the calendar debate.

In 1985, the Regents requested a study of academic calendars, "with each institution identifying the advantages and the disadvantages of both the quarter system and the semester system, taking into consideration educational, financial, and other factors" (Minutes, December 1985). On December 4, 1987, the Regents received a report based on the nine separate studies: "Findings and Prospects for Changing from a Quarter to a Semester Calendar in the Utah System of Higher Education." In reviewing the report, Commissioner Rolfe Kerr recognized the ambivalence and complexity of the issue as it was debated at each institution, but concluded: "It is the Commissioners' recommendation that the Regents require all colleges and universities in the Utah System of Higher Education to convert to the early semester/trimester calendar with common beginning and ending dates, effective Fall semester of 1989" (Minutes, December 1987).

One month later, on January 15, 1988, the Commissioner reversed his position and reported to the Regents that the "results of the studies were mixed with faculty and students at most of the institutions generally preferring to stay with the quarter system, and administrators . . . indicating possible long-range cost savings and potential for appropriate curricular reform by changing to a semester system" (Minutes, January

1988). He concluded this time, as did the Regents, that the expensive and time-consuming conversion be undertaken "only if academic and economic reasons and evidence are compelling." Kerr did not believe those conditions had been met.

The debate over academic calendars in the late 1980s was increasingly heated both at the campus level and at the state level. It involved deep divisions within academic faculties, and it continued to run aground on the question of institutional versus USHE control of academic policy decisions. Academic senates held spirited debates over the issue, but were united in claiming the right to make the choice in their own bailiwick. Administrators and Regents had a slight preference for the semester system, but recognized both the costs of changing the system (when unanimity was far from present) and they wondered about the wisdom of preempting authority over academic policy that has been lodged historically in campus faculties.

For several reasons, the calendar issue became more complex in the 1990s. While the whole public system had been on the quarter system for decades (with the exception of the College of Law at the University of Utah), this pattern began to change when Utah Valley Community College switched to semesters in 1993, partly to coordinate its calendar and programs with neighboring Brigham Young University, located in the same metropolitan area.

The academic calendar issue was placed in the forefront of higher education policy debates in Utah with the arrivals of Arthur K. Smith as President of the University of Utah in 1991, and George Emert as President of Utah State University in 1992. Both presidents came from outside the state and each saw certain advantages in the semester system. Each appeared to believe, too, that a switch from one system to the other would precipitate a healthy reexamination of the curriculum, graduation requirements, and teaching. President Emert pushed the issue to the Board of Regents despite strenuous opposition from the USU faculty, expressed through the academic senate. He succeeded only in alienating the faculty; the regents refused to mandate the change.

At the University of Utah, President Smith took a more subtle approach, publicly suggesting the advantages of changing to a semester system, but stressing repeatedly that the academic calendar is the business of the faculty. In this way, he encouraged the senate to address the calendar question while honoring the internal balance of academic power. More significantly, perhaps, Smith also positioned himself to resist regent and legislative pressures to make the decision at the system level. He argued for the semester calendar at the University of Utah, but he also argued against state-wide initiatives to require adoption of that calendar. On both of these university campuses the debate continued in 1995, but sufficient desire and will to change calendar systems had not emerged.

The debate also persisted among the Regents. In January 1995, the legislature's Strategic Planning Task Force Report included the following reference to academic calendars: "Since there has been considerable interest in the academic calendar issue, it is important to note that the Task Force is not recommending any action regarding the

semester system calendar at this point in time" (State Board of Regents Agenda, January 1995). Thus, after a decade of debate, neither the separate academic senates nor the state Board of Regents have been able to resolve the persistent issues surrounding academic calendars. Neither the issue itself nor the matter of who has authority to decide it has been settled.

Student Credit Transfer Articulation

As we have seen in the two previous sections, the transferability of students' academic credits has been a concern both in USHE reviews of academic programs and in the academic calendar debate. With an increasing proportion of students earning credits at multiple institutions during their undergraduate years, however, transfer of credit has become a major issue. In April 1982, the Commissioner's Office mandated system-wide transfer guidelines within USHE. Little has changed since this policy was adopted over a decade ago, although an USHE task force was a work on alterations and extensions of the original policy guidelines in 1995.

The 1982 statement regarding transfer of credit was based upon eleven precepts which framed the policy. The first principle was that each institution is responsible for developing its own policies so long as they are consistent with the Regents' general guidelines. Each institution was also charged with communicating to other USHE member institutions a clear statement of its policies.

Second, because students are greatly affected by credit transfer decisions, institutional policies were to be both easily understood by students and tailored to fit their individual academic program plans. Transferring students were to be entitled to an official assessment of their transcript by the receiving college or university vis-a-vis the applicability of their credits to their intended program of study.

A third guiding principle was that the quality of the sending institution is an important consideration, particularly with regard to matching a student's demonstrated academic achievements with the demands of his or her intended educational program. USHE institutions may accept credits from foreign universities, and from unaccredited American schools (including some military, religious, and vocational schools) on a case-by-case or course-by-course basis, consistent with their standing transfer acceptance policies (Minutes, April 1982).

Returning to our theme of system governance versus institutional autonomy, all of the USHE transfer guidelines assumed that credit would be assessed and accepted by a specific college or university, not by the USHE system as a whole. In December, 1982, the Board of Regents adopted two additional policies for transferring student credits (Minutes, December 1982). One pertained to general or liberal education course credits and the other to elective and academic major courses and credits.

The first policy stipulated that any student who completed a two-year associate of arts or associate of science degree from an USHE institution would have met automatically the general education requirements of any of the public four-year colleges

or universities within Utah. Students who had not completed AA or AS degrees at one of Utah's two-year schools were left to transfer their earned credits and have them candled against the receiving college's definition of general/liberal education requirements--often resulting in some loss of credit.

The other new guideline specified that USHE institutions must accept all 100 level (or higher) course credits earned anywhere within the system. Although not all transferred credit would count toward the specific requirements of an academic major, they would tally at least as elective credits toward the total required for a bachelor's degree.

To help students, advisors, and admissions officers to understand transfer policies more clearly, the Regents developed a transfer articulation guide. Even with it, USHE students continued to face some difficulties in transferring their academic work. To address these concerns, a 1994 USHE task force began examining transfer problems and articulation policies. Dean Reba Keele, a member of the task force, suggested that the traditional emphasis on "classes and credits" as the basic units of academic achievement should give way to the assessment of learning outcomes--with the award of credits by the receiving school being based on demonstrated knowledge and skill. While the idea appeals to reason, the prospect of such a policy raises another jurisdictional flag: learning outcomes would probably have to be evaluated by highly sophisticated instruments developed by commercial testing companies like American College Testing--moving this important academic process largely out of the control of either the faculty or the system.

Concurrent Enrollment

Concurrent enrollment is a simple idea with a complicated history involving higher education policy and governance issues. The simple idea, first tried in Minnesota and adopted by the Utah Board of Regents in 1984, was to facilitate concurrent study by highly motivated high school seniors in freshman courses offered by, or authorized by, a nearby college or university. The policy was intended to make the senior year in high school more challenging for advanced students, to shorten the college experience for participating students to less than four years of full-time study, and, as a result, to save money for taxpayers, parents, and students.

Specifically, the State Board of Regents stated that concurrent enrollment "is enrollment in college courses for credit by high school students who continue to be enrolled as high school students and counted in Average Daily Membership" (State Board of Regents, Policy and Procedures Manual, R165). Procedures and policies to govern concurrent enrollment were worked out by a joint committee established by the State Board of Education and the Board of Regents.

Concurrent enrollment credits could be earned in four ways: (1) high school faculty could teach college courses at the high school site, (2) high school faculty could teach courses on the college campus, (3) college faculty could teach courses at the high school, and (4) high school students could enroll at a nearby college campus and take courses

there. Negotiations between local school district officials and college or university administrators would determine local students' options (Minutes, July 1984).

As the program took shape in practice, concurrent enrollment was seen increasingly as a way to provide additional motivation for high school faculty as well as students. In most school districts, emphasis was placed on providing concurrent courses at the high school site rather than on the college or university campus, and in providing as many different subjects as possible. This approach offered professional development opportunities for high school faculty, and student motivation was enhanced by allowing students to apply credits earned in college (and appearing on college transcripts) to count simultaneously toward high school graduation requirements.

By December, 1986, some unresolved issues in the initial policy precipitated change. Concerns included the quality of college-level instruction by high school faculty at the high school site (where library, laboratory, and computing facilities were inferior), mounting costs due of administering concurrent enrollment programs (school districts still earned ADM credits for these students, while the higher education institutions needed funds to pay deputized high school teachers or college professors to offer the additional courses), questions about whether the quality of the academic experience was at least equivalent to traditional college courses (if not, then the most able students were being shortchanged), blurred student identities due to being at once a high school senior and a college freshman, and emerging prospects for remote instruction through the use of technology (State Board of Education - State Board of Regents [SBE-SBR] Minutes, December 1986). These issues prompted the establishment of the SBE-SBR Concurrent Enrollment Liaison Committee.

A preliminary report of the Liaison Committee in August, 1987, expressed concern about applying higher standards for participation in concurrent enrollment courses than for ordinary student admissions to the sponsoring college or university. One member of the Liaison Committee suggested that the program was elitist in giving unwarranted advantages to advanced high school students and to the best high school faculty, and argued for expanding access by including students with less distinguished records. Of greater concern to the Liaison Committee, however, was a need to set higher standards for selecting high school-based concurrent enrollment faculty, for relating them more thoroughly to their college or university faculty counterparts, and for monitoring the quality of their courses. Library and laboratory availability, and computer facilities, were also major concerns (Minutes, August, 1987).

Policy changes that arose from this preliminary report included: student concurrent enrollment participation requirements that followed established institutional admissions policies, greater clarification of contractual (negotiated between a school district and college or university) and non-contractual (negotiated on the initiative of an individual student) concurrent enrollments and early admissions, and faculty selection based on the same criteria applied to other adjunct professorial appointments in colleges and

universities. In-service preparation of high school teachers was to be provided through coordination between public and higher education (SBE-SBR, Minutes, December 1987). Higher education institutions were also expected to monitor their concurrent enrollment course offerings to safeguard their value and assure students that they were getting a genuine college experience.

New concurrent enrollment policies that reflected these recommendations were adopted by the Regents in January, 1988. No policy changes have been made since then, but concurrent enrollment practices have continued to evolve. The growing use of technology in education has been a driving force for the continued evolution of concurrent enrollment programs.

Jeffery Livingston, Associate Commissioner for Academic Affairs, recently stated that more students and parents are becoming aware of concurrent enrollment options each year and more are pursuing them (personal interview, January 12, 1995). Concurrent enrollment is still seen as a way to make the senior year of high school more challenging, while shortening the time required to earn a college degree. Suffice to say here that instruction at remote sites by interactive television, and computer-assisted instruction (both of which are on the rise) are having a significant affect on concurrent enrollment practices in Utah.

More importantly, for the purposes of our analysis, concurrent enrollment represents the most complex example of the relationship between higher education system governance and college or university self-governance of academic policies because it involves not only the higher education system (the Regents and Commissioner's Office), and the nine separate institutions of higher education, but also the State Board of Education and many local school districts. The sum of all this participation is a highly complex educational experiment which sprang from a simple idea, but which no single party now fully comprehends nor over which any party exercises definitive control. Educational quality, program costs, and learning outcomes remain shrouded in multiple bureaucracies.

Concurrent enrollment has become a major recruiting device for colleges and universities in their competition for college-bound Utah high school students (by causing seniors to identify with a particular college or university in advance). It has also been a financial boon to many high school teachers who earn extra pay by offering college courses, a windfall for school districts that can count the students for ADM purposes but don't have to pay those who teach them, and, at least to some degree, an advantage for high school students who get a jump on college. There is, however, little evidence to suggest that two of the original aims--to save students' time and to save public funds--have proven correct. Special appropriations have been necessary to sustain the program, and students who earn credits in advance of full-time college study tend to take as long to graduate as those who start from scratch. A thorough evaluation of Utah's concurrent enrollment experiment is in order.

The Use of Technology in Teaching

The use of emerging electronic technologies for extending educational opportunities throughout the state, or for changing educational practices within or around the traditional campus classroom, has raised a host of possibilities and many policy issues pertaining to USHE governance and policy processes. Both electronic distance education and classroom lectures were originally affected by the coming of televised courses in the 1950s. While educational television broadcast courses for the general public for academic credit (linked with appropriate correspondence work), they did not offer two-way communication between instructor and student, and the number and variety of such courses were severely limited both by the dry nature of instruction and the number of broadcast hours available.

Similarly, the use of television as a supplement for classroom instruction and, occasionally, as a means of presenting instruction for entire introductory college courses such as introductory biology, held some potential but ultimately presented only a minor challenge to traditional teaching techniques. Today, however, microwave transmission, optic fibers, and other electronic networks make it possible for tele-conferences and tele-courses to link students and faculty together in simultaneous two-way or multiple-site communications, offering the possibility of significant changes in teaching methods and curricular patterns. Electronic distance learning and computer instruction both remain in their infancy, but each presents a bewildering number of educational, governance, and policy issues for higher education.

These technological advances offer well-nigh irresistible temptations to a fiscally stressed higher education system, nationally and in the state. With Utah's high per-family tax burden and sharply increasing number of college students, Governor Michael Leavitt's support for a "Technology Initiative" was based on the premise that electronic means of instruction can supplant the need for expanding higher education facilities and faculties to meet the anticipated student enrollments of the next two decades. This initiative was a high-stakes gamble because it called for a four-year, $64 million, investment in computer and microwave technologies and other electronic devices, as well as extensive faculty training in the uses of electronic technology for teaching and curriculum development.

In October 1993 Commissioner Cecelia H. Foxley distributed to the state Board of Regents the Higher Education Technology Initiative which was prepared by the technology subcommittee of the Regents' Strategic Planning Task Force (October 27, 1993, Cecelia H. Foxley to state Board of Regents). This report succinctly summarized the aims and funding plan for the Technology Initiative as follows: (a) access through distance education, (b) quality enhancement through multi-media instruction, and (c) access to information through electronic networks (System Summary, 1995, Vol 2, No. 1).

The objectives for funding included, in order of priority, faculty development and training, curriculum and program development, and equipment and infrastructure

development. The four-year funding plan, to be provided through state appropriations, called for about $16 million a year. The technology subcommittee of the Regents formulated this plan to present to the legislature in response to Governor Leavitt's technological initiative for education in Utah.

The 1994 Utah legislature appropriated $9 million for the USHE Technology Initiative, $1.2 million of which was designated for public education and the development of campus fiber optic networks for ED-NET. About $7.8 million was left to the discretion of the Regents for underwriting the development of electronic instruction. Of this total $1,250,000 was allocated for faculty development, $3,000,000 for course development, and lesser amounts in various categories of hardware and software development. The institutional distribution of these funds ranged from $680,100 for the University of Utah to $219,000 for the College of Eastern Utah.

In 1995, the Utah Legislature appropriated $8.9 million for the Higher Education Technology Initiative, bringing the two-year sum to nearly $18 million. Associate Commissioner Jeffery Livingston, who chairs the Utah Education Network Steering Committee, expressed pleasure over the amount, but suggested that "even the four-year $64 million plan is $100 million less than what we estimate are the total technology needs during this time period" (System Summary, 1995, Vol. 2, No. 1, p. 1). To summarize, during the first two years of the Governor's technology initiative, the legislature appropriated only about half of the resources requested and, according to Associate Commissioner Livingston, only about one-tenth of the actual need.

In a period when programmatic funding in higher education is remaining stable or declining relative to the cost of living, however, even the appropriation of $18 million in two years for a specific and new purpose was highly significant.

According to USHE guidelines, funding priority was to be given to the development of courses that would enable Utah students to complete their general education requirements electronically through distance instruction. Other priorities included selecting the twenty highest enrolling courses statewide that meet baccalaureate graduation requirements, and concurrent enrollment offerings for high school students, so that they could be offered to students at home or at other remote sites (Commissioner Foxley, Memo to Presidents, August 23, 1994, p. 8.).

The policy issues imbedded in the Technology Initiative are at once reminiscent of older ones and new in character and scale. Faculty control of academic standards and quality through academic senates faces a new challenge from the Technology Initiative. Similarly, institutional service area assignments that have previously been an important dimension of Regent policy are harder to enforce if, indeed, they have any relevance at all to electronic instruction.

Electronic instruction knows few natural boundaries in time or space. A course developed at the College of Eastern Utah, when placed on the microwave network or on educational television, does not naturally stop at county or state boundaries. The

development of one excellent biology course at Utah State University or the University of Utah is presumably sufficient for all students in USHE institutions, and there seems to be no reason that the public should underwrite the development of other introductory biology courses. These same questions, however, are also being asked at the national or even international level. If a professor at Stanford University develops a superb course on constitutional law, is there any reason, even for an outstanding colleague at the Weber State University, to do the same thing? If so, why? If not, then the question of where credit arises and where it is recorded for students becomes infinitely more complex.

Research is essential to answering these and other questions that are raised by the Technology Initiative. Is a world-class economics course beamed from the University of Chicago to Utah on an optical fiber as effective a learning opportunity for students as the experience of a live course with a professor they talk with after class? The answers to such questions are not necessarily "yes" or "no." For the future, the task will be to know how to find an optimal blend of the two forms of instruction.

The Utah System of Higher Education, and its counterparts across the nation, are faced with a vast array of policy and governance issues that stretch all the way from faculty senate floors on individual campuses to the chambers of boards of regents and state legislatures. Will the front-loaded costs of electronic instruction be repaid by new educational efficiencies? Will the attrition of local academic control exact a high price in educational quality? Will educational homogenization occur, or will new peaks of excellence spring up across the academic landscape? Whatever the future realities, major changes in academic culture and academic traditions are probably inevitable. The real question for policy makers is whether or not the changes will be positive for undergraduate students, for faculty, for teaching and scholarship, and for the public interest. Whatever the excellence versus access dilemmas raised previously in higher education, and whatever the academic senate based institution-level versus system-level governance issues we have experienced in the past, the technological possibilities and initiatives of the last few years will force us to adapt in ways we have not been able to anticipate and cannot yet foresee. We do know, however, that vigorous, conscience, and collective attention to the possibilities--and to the perils--in the current situation will be necessary to maintain the variety, excellence, and access which are in the interest of the Utah public.

Conclusions

The Utah System of Higher Education was established by law in 1969 to offer "the people of the State of Utah a more efficient and more economical system of high quality public higher education through centralized direction and master planning" (Laws of Utah 1969, 583). USHE was charged with avoiding unnecessary duplication, providing orderly development of facilities and academic programs, coordinating the units within the system, and the "development of the role or roles of each institution consistent with the historical heritage and tradition" of the college or university.

The climate for higher education policy making was much simpler twenty-five year ago. Of the five representative issues we have explored here, only the first, the definition of institutional role assignments and quality control, was anticipated as a significant system concern. Each of the four succeeding issues in our analysis illustrates additional complications and pressures that have come to bear on relationships between the Utah System of Higher Education and its nine colleges and universities. These same pressures have strained relationships between the emerging legal-public authority of the Regents and the Commissioner's Office and the historic academic-professional authority of the faculty of each institution through its academic senate. This tension is especially evident in the two older research universities within USHE.

Not only are there important questions of substance facing higher education in Utah, such as quality assurance and the breadth and nature of public assess within the system, but there are also significant matters of procedure, regarding where authority to resolve emerging issues is (or should be) vested, as in the debate over academic calendar alternatives. In both cases, we express concern that the system and its constituent parts, arrayed in their current relationships, is ill-equipped to respond to the complexity of issues now facing them. In the last several years, for example, three of the nine institutions have "moved up the academic ladder" from community college to college, or from college to university status. Does this phenomenon provide encouraging evidence of the adaptability of the system, or disturbing testimony of its inability to abide by the principles it was established to protect?

Whether we look at this recent but reoccurring story of institutional ascension, or at the five issues we have explored in detail, we believe it is clear that the Utah System of Higher Education now faces complexities and forces that exceed the scope envisioned for it. We believe, therefore, that the time is right for all parties that have a stake in the mission and definition of the Utah System of Higher Education to join in considering the future of the system itself--neither with an eye for destroying it nor for further empowering it, but with the interests of students, faculty, and the public at the forefront.

How can institutional autonomy and responsibility be enhanced in an era when downsizing large institutions is seen as desirable? How can system governance be strengthened in areas where institutional myopia impedes genuine cooperation and educational reform? Who are the most trustworthy guardians of academic quality? At what level will broad public access be defended most effectively? How can all interested parties respond most constructively to the unpredictable effects of large-scale technology use in college teaching and learning?

The vitality and credibility of public higher education in the Utah depends on the willingness and ability of both the Utah System of Higher Education and its nine colleges and universities to adapt themselves to the many new realities facing them.

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PERSPECTIVES ON THE FINANCIAL CONDITION OF PUBLIC HIGHER EDUCATION IN UTAH

BY PAUL BRINKMAN

What is the condition of Utah public higher education from a financial perspective? How has it changed in recent years? These questions cannot be addressed adequately in a narrow, highly focused manner. Many aspects, from the dollar volume of the enterprise to who pays for higher education, are legitimate topics of discussion. Financial condition, in other words, is appropriately examined from a variety of perspectives, and that is the thrust of this chapter. The first segment deals with expenditure patterns. Employee compensation is examined too. The second segment deals with revenues, particularly comparisons of growth patterns among the diverse revenue streams on which colleges and universities have come to depend. Special attention is given to revenues from state tax funds and from tuition and student fees. Student financial aid is addressed as well.

Conceptually speaking, three issues are addressed: the adequacy of resources, where the resources come from, and affordability. Most of the analysis will focus on time-series analysis within Utah, but some consideration is given to Utah in a cross-sectional, or national, context. Only funds for current operations are considered.

EXPENDITURE ANALYSIS

In higher education, expenditures typically are categorized along three dimensions: functions, objects, and cost centers, or, in other words, by the purpose of the expenditure, the goods and services that are purchased, and the operating units that do the spending. Except for the compensation analysis, what follows is based on the functional categorization. We begin with all functions in the operating budget, then focus on those functions that are related primarily to education.

Expenditures by Function: Longitudinal Perspective

Public higher education in Utah, the Utah System of Higher Education (USHE), has been growing in economic terms. Total operating, or "current fund," expenditures for operations increased from $703 million in 1986 to $1.34 billion in 1994 (Table 1; years are July-to-June fiscal years). The rate of growth is slightly exaggerated by accounting changes (see the discussion of public service below), but even after adjusting for those changes total USHE expenditures increased by about one-third in constant dollars over the period. The price deflator used throughout the chapter is the Higher Education Price Index (HEPI), which reflects price changes for a market basket of goods and services typically purchased by colleges and universities.

Table 1
USHE Current Fund Expenditures And Transfers

Function	1985-86	1993-94	Change Current $	% Change Current $	% Change Constant $
E&G	$538,669,064	$1,000,215,856	$461,546,792	85.7	31.4
Auxiliary Enterprises	64,533,761	108,358,962	43,825,201	67.9	18.9
Hospital	99,374,305	233,959,000	134,584,695	135.4	66.7
Total	$702,577,130	$1,342,533,818	$639,956,687	91.1	35.3

*E&G figures include expenditures by the State Board of Regents and state-wide programs.
Source: USHE 1985-86...1995-96 Data Books.

Current fund expenditures are customarily divided first into the three functions shown in Table 1. E&G, for "educational and general," in this context has its national rather than its Utah meaning. Nationally the term refers to all expenditures that make possible, directly or indirectly, the provision of instruction, research, or public service. In Utah, the term means the same thing except that the University of Utah's (UU) medical school is excluded from the E&G category for the purposes of state funding. Auxiliary enterprises, such as housing, the book store, and food service, are self supporting activities, as is, in the main, the University of Utah's hospital. The analysis here for both expenditures and revenues will focus on the E&G portion of the operating budget.

The customary functional structure for E&G expenditures is shown in Table 2. The first three functions, instruction, research, and public service, comprise higher education's mission, or reason for being. The next four functions--academic support (libraries, academic computing, etc.), student services (admissions and records, advising, etc.), institutional support (executive management, accounting, fund raising, etc.), and plant operation and maintenance, or O&M (utilities, custodial, minor repairs, etc.)--make up the support areas. Scholarships and fellowships are expenditures that may or may not involve an institution's own resources. Transfers are movements of money from the current fund to some other fund; positive amounts are an indication that money is available in the operating budget to either pay off capital debt or move money to long-term reserve accounts such as the (quasi) endowment or building fund.

Several things stand out in Table 2. First, the largest growth in dollar terms has been in expenditures for instruction. This is to be expected given that seven of the nine USHE institutions are devoted primarily to instruction and given that the system has been experiencing substantial enrollment growth. Second, research has been growing at a relatively fast rate. Two factors are particularly important for the growth in research activity: the ability of faculty at the USHE's two research universities, UU and Utah State University (USU), to compete successfully for research funding, especially from the federal government, and the State's decision to let the institutions retain the so-called "indirect cost reimbursement" that accompanies most research awards (to be used to help

generate additional research funding). Of the three mission functions, public service appears to be growing the fastest. It happens, however, that a portion of this growth has to do with accounting changes in the way that clinical practice income within the U of U's medical school is reflected in financial statements, rather than real growth. As a practical matter, the true growth rate in this category cannot be easily determined although it is likely to be closer to 100% than the 174% figure reflected in Table 2.

Table 2
USHE E&G Expenditures And Transfers

Function	1985-86	1993-94	Change Current $	% Change Current $	% Change Constant $
Instruction	$193,684,347	$319,501,566	$125,817,219	65.0	16.8
Research	82,477,629	151,315,457	68,837,828	83.5	29.9
Public Service	59,389,918	162,735,771	103,345,853	174.0	94.0
Mission Subtotal	335,551,894	633,552,794	298,000,900	88.8	33.7
Academic Support	43,295,579	75,301,486	32,005,907	73.9	23.1
Student Services	23,053,514	54,224,521	31,171,007	135.2	66.5
Institutional Support	56,104,630	75,157,488	19,052,858	34.0	-5.2
Plant O&M	47,663,941	62,231,674	14,567,733	30.6	-7.6
Support Subtotal	170,117,664	266,915,169	96,797,505	56.9	11.1
Scholarships	28,288,944	72,230,369	43,941,425	155.3	80.7
Transfers	4,710,562	27,517,524	22,806,962	484.2	313.5
Total	$538,669,064	$1,000,215,856	$461,546,792	85.7	31.4

Distribution of SBR and state-wide program expenditures in 1986 is estimated.
Source: USHE 1985-86 - 1995-96 Data Books.

The growth rate for the mission area as a whole is higher than for the support, or overhead, area as a whole. This is a positive development. It is particularly positive that the mission areas grew faster than institutional support (general administration) and plant O&M, as these two support functions are most clearly a form of overhead. Academic support and student services are conventionally but perhaps inappropriately viewed as overhead in their entirety given the "close in" support that some of the activities involved, such as libraries, academic computing, and academic advising, provide to the educational process. Institutional support and plant O&M actually declined in real, that is, inflation adjusted, terms.

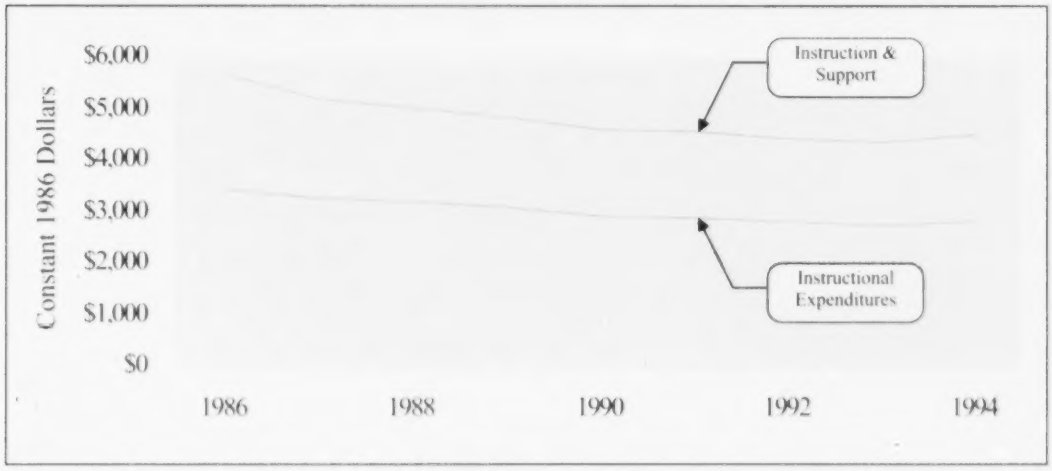
Also quite remarkable is the growth in scholarships and fellowships, or student financial aid. As we will see, however, that growth is dwarfed by the increase in tuition and fee revenues as well as in tuition rates (see below).

The picture so far is positive. Growth is substantial and in the right places. But how do expenditures look when scaled by the workload they make possible? This question cannot be addressed correctly for all expenditures at once. Because of its tripartite

mission higher education's workload can be measured legitimately in several different and incomparable ways. Analysts customarily focus on the educational mission, using enrollment as the measure of workload.

Expenditures related to students include the following: all of instruction, all of student services, and a pro rata share of academic support, institutional support, and plant O&M (since these latter three areas also support the other missions). As shown in Figure 1, whether educational expenditures are viewed narrowly (just instruction) or broadly (instruction plus support costs), the USHE is spending considerably less per student now, after adjusting for inflation, than it was in the mid 1980's. The accumulated savings are huge. In 1993-94 alone, it would have taken an additional $52 million to make up for the reduction in per-student instructional expenditures, $93 million to cover the reduction in per-student expenditures for instruction and supporting activities.

Figure 1
USHE Educational Expenditures per FTE Student in Constant 1986 Dollars



One explanation for this development is the Master Plan for higher education adopted in 1986. A key strategy in the plan was to have a greater proportion of students receive at least part of their higher education in a two-year college rather than a university. Whether one of the plan's basic assumptions is correct, that costs at two-year colleges are actually less than at universities, when lower-division at the one is compared to lower-division at the other, is debatable. In any case, the State's funding formula generates funding requests on that basis. Accordingly, system revenues, and thus expenditures, increase at a slower rate when additional students enroll in the USHE's two-year colleges than in its four-year colleges.

Nationally, there is evidence to suggest that fewer students who intend to go on to a four-year degree actually do so when they begin their studies in a two-year college rather than a four-year college (Dougherty, 1992). Thus, successful implementation of the

Master Plan also means that USHE's upper-division enrollment is less than it would other wise be, which also contributes to lower per-student expenditures.

The decline in expenditures per student may also reflect efficiencies due to scale effects. This would be especially likely for the small institutions in the USHE, but rapid growth can produce short-term, positive returns to scale in the larger institutions too as output grows faster than inputs.

Finally, the decline reflects a deliberate policy of state government in Utah. Since the mid 1980's there have been no inflation adjustments to the state-appropriated funding base for non-personal services (about 10 percent of the total budget excluding library acquisitions and utilities). Given that scenario and the fact that rate increases for personal services track inflation (approximately, over the long-term), a decline in inflation-adjusted expenditures is to be expected. There are sources of support, but they tend not to be targeted at instruction or instructional support, thus leaving the institutions with declining dollars per student for educational purposes.

Whatever the reasons for the decline in expenditures per student, how should the decline be interpreted: positively or negatively? One is reminded here of the glass which is at once both half full and half empty. Either the USHE has become considerably more efficient in its operations or the quality of its educational services has deteriorated. It is not easy to say, and impossible to determine definitively. The same ambiguity emerges when expenditures at the USHE institutions are compared to those at institutions elsewhere in the country.

Expenditures by Function: Cross-Sectional Analysis

Meaningful comparisons of per-student expenditures among systems of higher education institutions cannot be done in a straightforward manner because the composition of these systems, by type of institution, differs from one state to the next. It is easier to develop valid comparisons on an institutional basis. To facilitate such comparisons, the State Board of Regents (SBR) has selected peers for the USHE institutions, that is, institutions that are similar to those in Utah with respect to mission, size, nature of student body, broad programmatic emphasis (such as research), and academic programs. Federal surveys provide the data for comparisons of this kind.

On a per-student basis, USHE institutions spend less for educational purposes than comparable institutions--a lot less (Table 3). In 1991-92 (latest available data), USHE institutions spent only about 80% as much for instruction per student as did the peers. Expenditures per student for student services at several USHE institutions exceeded those of the comparison group, but this is true mostly because of scale effects (a few of the USHE institutions are relatively small compared to the peer institutions) or because of special clientele (a significant proportion of students at the College of Eastern Utah (CEU) are Native Americans). Overall, for instruction plus support costs, the USHE average is only 82.5% of the peer value.

Table 3
USHE Institutions, Percent Of SBR Peer Group Averages For Expenditures Per FTE Student, Various Expenditure Categories, 1991-92

Institution	Instruction	Student Services	Academic Support	Institutional Support	Plant O&M	Average
UU	76.2	89.9	80.8	82.5	84.6	79.0
USU	77.1	75.2	69.2	109.2	77.4	79.3
WSU	93.4	91.1	81.8	83.8	82.6	89.4
SUU	64.0	111.9	83.4	93.5	104.0	79.0
DIXIE	76.7	102.1	73.2	62.1	105.4	79.4
SNOW	71.6	140.9	95.3	83.1	114.9	87.5
CEU	87.1	212.0	98.8	88.1	99.4	101.6
UVSC	79.4	99.2	91.2	90.3	86.5	85.2
SLCC	85.8	106.6	60.9	69.0	86.8	82.4
USHE Average	80.1	96.9	77.8	86.4	86.5	82.5

Institutional averages are weighted by expenditure amounts by category.
USHE averages are weighted by enrollments at USHE institutions.
Source: USHE 1995-96 Data Book.

The data are not adjusted for relative cost of living by location. Such an adjustment would likely reduce the above gap by a few percentage points, but less so recently as living costs in Utah has been increasing relative to the national average.

Expenditures for Employee Compensation: Cross-Sectional Analysis

Higher education is labor intensive. Personnel costs typically are more than eighty percent of total costs. Are USHE institutions offering competitive pay? The typical way of addressing this question is through comparative data on salaries and benefits. Faculty pay differs considerably by type of institution, so pay comparisons are always done at the institutional rather than the system level. The picture for USHE institutions is mixed, depending somewhat on how the comparisons are structured and on particular USHE institutions. All of the USHE institutions trail average compensation levels for their respective SBR peer groups (Table 4). The differences range from about 5% to 14%, or not as large as the expenditure differentials for instruction shown above (Table 3); the latter differentials ranged from 7% to 36%. This suggests that USHE institutions employ fewer faculty for the same number of students or that they spend less for non-faculty items in their budgets. Given the lack of inflationary adjustments for non-personal services mentioned earlier, the latter is probably at least part of the explanation. The universities, especially the UU and USU are closest to the average compensation levels of their peers at the assistant professor level. This is to be expected, as the majority of faculty are hired at that rank. The two research institutions simply must come close to national market levels, as reflected by the peer institutions, in competing for new faculty.

Table 4
USHE Compensation As A Percent Of Comparison Group Averages, 1993-94

	State Board of Regents' National Peer Groups				Regional Institutions	In-State Institutions	
	Full Professor	Associate Professor	Assistant Professor	Faculty Overall	Faculty Overall	Faculty Overall	Classified Staff
UU	94.3	94.2	98.4	95.2	107.3	93.1	90.6
USU	89.2	94.4	90.9	94.1	98.8	82.7	93.2
WSU	97.0	96.6	98.6	97.4	107.0	112.1	88.2
SUU	83.7	87.5	88.9	87.2	103.1	101.2	86.4
DIXIE				85.9	106.1		97.8
SNOW				89.7	110.8		100.5
CEU				86.3	106.6		99.8
UVSC				90.9	112.3		102.3
SLCC				86.5	106.9		100.1

Regional comparisons for faculty are based on similar institutions in the Mountain region: AZ, CO, ID, MT, NM, NV, UT, WY. The selection of institutions followed the Carnegie classification system: public research universities for UU and USU, public masters colleges for WSU, public baccalaureate colleges for SUU, and public two-year colleges for the USHE two-year colleges. The in-state comparison for faculty is BYU for the UU and USU, and Westminster for WSU and SUU. The in-state comparison for staff is other organizations in Utah. Data came from the USHE's annual survey and the AAUP's annual survey.

Table 4 also contains regional and local perspectives on faculty compensation. USHE institutions fare better when the focus shifts away from a national perspective, although compensation at the UU and especially at USU trails BYU by an appreciable margin. The regional perspective is particularly appropriate for the two-year colleges since they do not operate, in the main, in a national market.

Compensation at the two-year colleges for classified, or non-exempt, staff (such as secretaries, computer operators, and advisors) is at market levels when compared to pay at other organizations (mostly businesses) in Utah. University pay for such staff is well below market.

REVENUE ANALYSIS

Public higher education receives revenues from many sources. Two are especially important for virtually all public colleges and universities: state appropriations from tax funds, and tuition and fees. They will be the focus of this section.

Revenues by Source

The USHE's current fund revenues follow the same pattern as expenditures, that is, substantial growth overall accompanied by quite different growth rates for individual revenue sources (Table 5). All sources but one, federal appropriations, show gains after adjusting for inflation. The most important result is the relatively slow growth rate for state tax funds, just 4.7 percent, particularly when compared to the relatively high rate of growth in revenues from tuition and fees. In other words, in recent years the tax payer's role in the financing of public higher education in Utah has been gradually decreasing.

Table 5
USHE Current Fund Revenues

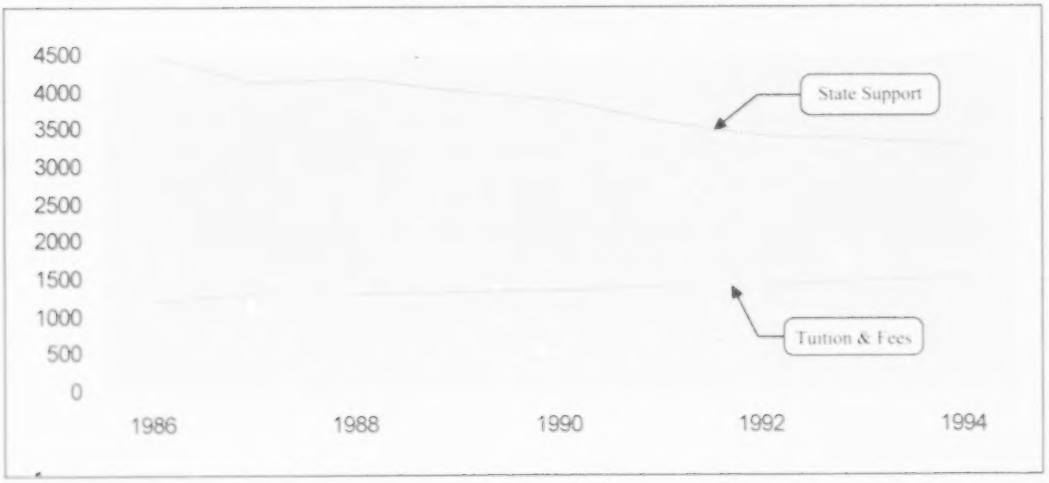
Revenue Source	1985-86	1993-94	Change Current $	% Change Current $	% Change Constant $
Tuition and Fees	$67,030,211	$171,251,149	$104,220,938	155.5	80.9
State Tax Funds	250,634,144	370,574,510	119,940,366	47.9	4.7
Federal Appropriations	6,288,942	5,280,452	(1,008,490)	-16.0	-40.6
Gifts,Grants,Contracts	159,150,594	286,628,876	127,478,282	80.1	27.5
Sales and Services	41,824,821	146,225,130	104,400,309	249.6	147.5
Endowment*	5,000,000	9,296,447	4,296,447	85.9	31.6
Other	9,473,411	29,347,410	19,873,999	209.8	119.3
E&G Subtotal	539,402,123	1,018,603,974	479,201,851	88.8	33.7
Auxiliary Enterprises	64,485,552	106,145,515	41,659,963	64.6	16.5
Hospital	101,627,032	240,334,000	138,706,968	136.5	67.4
Total	$705,514,707	$1,365,083,489	$659,568,782	93.5	37.0

Distribution of SBR and state-wide program revenues by source in 1986 is estimated. *Endowment revenue in 1986 is estimated.
Source: USHE 1985-86...1995-96 Data Books

Figure 2 shows the gradual, but substantial, nature of the shift in the funding burden from state tax funds to tuition and fees. The contribution of each is shown in constant dollars on a per-student basis. Presented in this manner, several points become clear. One, resources from state government are declining. Two, resources from tuition and fees are increasing. Three, the added revenues from tuition and fees do not come close to replacing the lost revenues from state government; in fact, only about 27% of the loss was replaced in 1994, leaving a shortfall of $61.5 million even before taking into account any growth in state student aid, some of which decreases net tuition and fee revenues.

It is the decline of state tax funds, in constant dollars per student, that is responsible for the constant-dollar decline in expenditures for instruction (or instruction plus support functions) discussed earlier (Figure 1). While revenues from other sources have increased in real terms, the major alternative sources (sales and services of educational services and gifts, grants, and contracts) generate revenues that, in the main, do not support the instructional mission. The growth in sales and services of educational departments is exaggerated because of changes in accounting procedures with respect to clinical practice income mentioned earlier; the actual growth is difficult to determine but it is likely to be comparable to that experienced by the hospital.

Figure 2
USHE Revenue per FTE Student: Tuition and Fees versus State Tax Funds, Constant 1986 Dollars



The decline in state tax funds as a share of the overall financing of public higher education is not unique to Utah. It has been going on across the country for some time (Halstead, 1994). Other needs, such as corrections and Medicaid, have been absorbing increasing amounts of state tax-based resources. For example, in fiscal year 1993, state spending on Medicaid as a percent of state general fund budgets surpassed higher education for the first time ever (Jones, 1994). As one of the largest discretionary items in state budgets, it is perhaps not surprising that higher education has been losing ground. Utah's decline, by the way, is very close to that for the nation as a whole. Measured in terms of the share of state and local tax revenues that is allocated to public higher education, the nation saw a decline of 21.6 percent from 1978 to 1994, compared to a decline in Utah of 21.7 percent (Halstead, 1994).

While it may be comforting to those in the USHE to know that the decline in state support, in constant dollars per-student, is not unique to Utah, there are other interstate comparisons which are less comforting. State tax funds per student in USHE institutions are well below that of comparison group averages (Table 6). For the USHE as a whole, state tax fund revenues per student in 1991-92 were just 74.4% of the average for the peer institutions.

This relatively poor showing is not due to a reluctance in Utah, when compared to other states, to fund public higher education. In 1994, for example, Utah ranked fifth highest among all the states in "education appropriation" to higher education as a percent of tax revenues (Halstead, 1994). This ranking excludes funding for research, agricultural experiment stations and extension, and medical education. Including these factors would lower Utah's ranking somewhat, but it would still be well above average if they were included. Great precision is not needed here to grasp the essentials. A major

factor in explaining why Utah's taxed-based appropriations per student are three-fourths as much as in the comparison institutions is the state's relatively low tax capacity, especially on a per-capita basis (Halstead's analysis places Utah dead last in this category). In addition, Utah has an above average number of students relative to its population. Contrary to popular belief this is not because of a high college participation rate among high school graduates--Utah is slightly below average in that regard--but because the State ranks number one in high school graduates per capita (Halstead, 1994).

Table 6
USHE Institutions, Comparative Data On Revenue From State Tax Funds And Tuition And Fees, Per FTE Student, 1991-92

	State Tax Funds per FTES	SBR Peer Group Average	% of Average	Tuition and Fees plus State Tax Funds per FTES	SBR Peer Group Average	% of Average
UU	$6,472	$8,244	78.5	$8,897	$12,420	71.6
USU	6,186	8,494	72.8	8,473	11,792	71.9
WSU	3,666	4,554	80.5	5,578	6,762	82.5
SUU	3,551	4,554	78.0	5,140	6,762	76.0
DIXIE	3,249	4,635	70.1	4,672	6,016	77.7
SNOW	3,435	4,635	74.1	4,595	6,016	76.4
CEU	3,829	4,635	82.6	4,738	6,016	78.8
UVSC	2,737	4,635	59.1	4,447	6,016	73.9
SLCC	2,923	4,635	63.1	4,622	6,016	76.8
USHE Average	$4,761	$6,402	74.4	$6,765	$9,138	74.0

Source: USHE 1995-96 Data Book.

In some states, low levels of state support per student are offset by relatively high levels of tuition and fee revenues. This is not the case in Utah. Tuition and fee revenue in Utah does not make up for the relative shortage in state support when viewed from a comparative, interstate perspective. Indeed, the deficit when tuition and fee revenue is combined with state tax fund revenue is very nearly the same as that for state tax fund revenue alone, although the gap is reduced for UVSC and SLCC to levels comparable to the other USHE institutions (Table 6, right-hand columns). On average, USHE institutions must make do with about three-fourths of the general purpose, education-related resources available to their peers in other states.

Student Share

There is great variation in tuition rates across the nation's public colleges and universities, especially among four-year institutions. The highest rates among four-year institutions are more than six times the lowest rates. About 80 percent of those institutions are in the $1,500 to $4,000 range in 1994-95. Among USHE institutions, tuition rates are not exceptionally high or low. Tuition at the UU and USU is somewhat lower than the national average, while tuition at the two-year colleges is somewhat

higher than that standard. Resident tuition at USHE institutions of all types is higher than tuition in the surrounding states.

By one measure of tuition effort in 1994, tuition and fee revenues per student (net of state appropriated student aid) compared to disposable personal income per capita, the USHE ranked 31st among the states but just above the mean value for the nation (Halstead, 1994). On this measure, which takes into account family size, Utah ranked below Colorado and Arizona, and above Idaho, Nevada, New Mexico, and Wyoming. In short, the tuition effort in Utah is about average.

The shift in funding share from state tax funds to tuition and fees is not exactly equivalent to a shift in the financing burden to students, because students and their families are not the only source of tuition and fee revenue. Put another way, gross tuition and fee revenue figures do not take into account the effects of student financial aid. Earlier it was shown that expenditures for scholarships and fellowships increased by $44 million, or 155%, from 1986 to 1994 (Table 2). This student subsidy, which summarizes contributions from the federal government, state government, private donors, and the institutions themselves, offsets a major portion of the increase in revenue from tuition and fees shown in Table 5. Still, tuition and fee revenue not offset by student aid, the net increase felt by students, grew by 60% after inflation during the period. These figures do not include student loans because loans do not reduce the student share of funding; they merely delay payment.

From the perspective of the low-income student there is less in the student aid figures than meets the eye. Some of the aid is merit-based rather than need-based. In addition, there was a sharp decline in the amount of need-based aid available in 1994 compared to 1993. The major need-based program, Pell Grants provided by the federal government, declined $7.8 million, or nearly 16% of the 1993 total, and more declines are expected in 1995. These particular declines are due to changes in eligibility rules, rather than program cuts. Given the mood of the Congress regarding the federal budget deficit, it is unlikely that the federal government will be the source of significant increases in student aid anytime soon and program reductions are certainly possible.

Some states have major financial aid programs of their own. This has tended to be true for states that have adopted a high-tuition, high-aid funding strategy for public higher education, such as Pennsylvania, but it is not confined to such states; for example, tuition rates in Colorado's public colleges and universities are moderate yet the state has a substantial student aid program. Utah is among the states with very modest student aid programs. Utah does participate in the State Student Incentive Grant (SSIG) program in which states receive federal student aid if they provide matching funds. But that program has been shrinking; in current dollars, the total amount of SSIG funds awarded to USHE students declined from $1.34 million in 1986 to $1.10 million in 1994, a period in which tuition was increasing at twice the rate of inflation. By contrast, the USHE's scholarship program for prospective teachers has grown to nearly $900,000 (BYU and Westminster

students are eligible too). The state also authorizes USHE institutions to waive up to ten percent of tuition and fee revenue. Since at this point the institutions lose tuition revenue when a waiver is granted, tuition waivers are properly viewed as institutional rather than state aid.

Subsidized loans are not included in the above figures. Students who borrow end up paying more for their education because of interest charges, but not as much as they would if they had to begin paying market-level interest rates as soon as the loans were made. Students are turning increasingly to loans as a means of financing their college education. For example, in 1994, the Utah Higher Education Assistance Authority guaranteed a total of $78.6 million in loans for USHE students (or their parents), an increase of 26.5% from 1993, and 2.6 times the amount just five years previously ($30.1 million in 1989). These figures do not include all loan programs much less personal loans that never get recorded. Utah has yet to reap the harvest from this recent exponential growth in student loans, for example, in reduced buying power of college graduates.

SUMMARY

There have been positive developments since 1986 in expenditure patterns, as a greater share of resources are being applied to mission rather than support areas, but on a per-student basis expenditures for instruction are considerably lower now, after adjusting for inflation, than just eight years ago and considerably lower than that enjoyed by comparable institutions elsewhere. On the revenue side, the burden of paying for higher education has been shifting from tax payers to students. On a per-student, inflation adjusted basis, state tax funds have decreased substantially. Some of that loss has been made up by substantial increases in revenue from tuition and student fees. Despite the increased burden on students, public higher education in Utah remains about average in affordability when compared to other states. There have been disturbing signs recently, however, in the form of sharp declines in federal need-based student aid and dramatic increases in borrowing by students. The state may want to consider developing a more substantial student aid program in order to protect access for needy students. If recent developments continue, that access would certainly be threatened. Increased institutional efforts to raise more private support for student financial assistance would also be appropriate.

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ROLLING IN THE DOUGH, RUNNING FROM REFORM: AN ANALYSIS AND CRITIQUE OF THE 1994 UTAH LEGISLATIVE SESSION AND ITS IMPACT ON EDUCATION

BY BOB L. JOHNSON, JR.

As is noted in the Constitution of Utah, the Utah Legislature is charged with providing for the establishment and maintenance of two, non-sectarian systems of education in the state.[2] These include a system of public education and a system of higher education. In fulfilling this constitutionally-based charge, the Utah Legislature meets on an annual basis to consider matters of concern in these and other areas of state government.[3] While the number, significance, and impact of the policy decisions made by this legislative body vary from year to year, decisions that affect the governance and operation of both public and higher education policy sectors are made annually.

Given the character of the American electoral system, participation in the policy-making process at all levels of government may be described as fluid. The actors in a given policy-making arena change over time; elected officials, bureaucrats, and lobbyists come and go. An examination and comparison of individuals holding elected office and key positions in the Utah Legislature during the 1990, 1992, and 1994 sessions attest to this fluidity.[4] It would appear that such fluidity accounts for a degree of the variability in legislative focus from session to session and year to year.

When comparing the nature and character of legislative sessions within a single state across years,[5] other factors likewise focus and define the legislative agenda for a given year. For example, it would appear that factors such as public opinion, gubernatorial priorities, economic vitality, resource availability, partisan politics, a significant crystallizing event, and immediate and pressing problems function to focus the attention of policy-makers. Considered en toto, these factors may be likened to a dynamic constellation of sorts. On the one hand, as a constellation in a given point in time, such factors come together to define the context of a particular legislative session. On the other hand, these factors are dynamic and subject to change from year to year (and perhaps within a given year), e.g., public opinion changes, gubernatorial agendas and

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2 Utah Constitution, Article X, Section 1.

3 The Utah Legislature is required by the Utah Constitution to meet in an annual general session that is not to exceed 45 calendar days. This annual session convenes on the third Monday in January of each year. In addition, the Governor has the prerogative to convene the Legislature in "extraordinary" or "special" sessions to address specific concerns. Such sessions, however, cannot exceed 30 calendar days. See the Utah Constitution: Article VI, Sections 2 and 16; Article VII, Section 6.

4 All members of the Utah House stand for election/re-election biennially in even-number years. Members of the Utah Senate have four-year terms of office. Half of the Senate stands for election/re-election in each biennium. See the Utah Constitution: Article VI, Sections 3 and 4.

5 And for that matter comparing the nature and character of legislative sessions in the same year across States.

priorities are subject to change, the economy fluctuates, the availability of resources varies, etc. Although this metaphor is somewhat imprecise, it appears to have some utility for helping one understand those factors which define the character of a given legislative session. More importantly, this metaphor and these factors suggest that the character, dynamic, issues, and products of a given legislative session are somewhat unique.

In the context of educational policy, the particular interests and focus of a given legislative session are never totally predictable. To be sure, the emergence from year to year of certain educational issues is predictable. Debates over funding and facilities, for example, would appear to be perennial. However, other issues appear less predictable, both in terms of their presence on the legislative agenda and the publicity they receive.

With these caveats in mind, the purpose of this chapter is to provide a critical review of the 1994 Legislative session as it relates to public and higher education in Utah. To the extent that a given policy relates to public or higher education, the focus here is necessarily limited. More specifically, attention will be given to those educational policies deemed most significant, i.e. those judged as having an immediate, substantive, and/or symbolic impact on educational governance and practice in Utah. To the extent that the author seeks to describe and interpret the political context out of which these various educational policies emerged in the session, the review is intended to be critical.[6] Thus, in seeking to describe and make sense of the 1994 Utah General Legislative Session, two sets of lens are utilized: an educational lens and a political lens.

In addressing this purpose, the chapter is divided into several sections: defining contextual features of the 1994 Legislative Session; noted agendas for the 1994 Session; significant issues and legislation in the public education sector; significant issues and legislation in the higher education sector; and reactions and summary of the 1994 Session. Before and after reading the chapter, the reader is encouraged to reflect on the titles given each section and on the sequence in which they appear in an attempt to discern and grasp the logic which connects them. In addition, one should avoid examining the trees at the expense of the larger forest. When examining policy, the temptation to focus exclusively on a single piece of legislation without giving attention to the greater context is ever present. Further, the reader is encouraged to put this chapter in the context of a series of articles that have been written describing and summarizing educational policy as passed by the Utah Legislature in previous years.[7]

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[6] Given that this description and interpretation are offered by a single individual, the limitations and biases associated with this approach should be duly noted.

[7] For an analysis of the impact of the Legislature on education in other years see the following in previous Utah Education Policy Center Yearbooks: "The Organization and Control of Public Education In Utah," 1992-93 Yearbook; "The Profile and Character of Educational Reform in Utah, 1983-1993, 1993-94 Yearbook; and "The 1993 Utah Legislative Session: Policy Implications for Educational Structure and Governance," 1993-94 Yearbook.

THE POLITICAL CONTEXT

A retrospective look at the character and dynamics of the 1994 Utah Legislative Session requires that one consider the larger context out of which the Session emerged. Given that state government is charged with creating and sustaining a wide range of public services, the vitality of a state's economy in the years immediately preceding and following the Session is of crucial importance. This importance is underscored by the fact that the services provided by state government are financed by revenues generated from a wide array of taxes. The amount of revenue available for the financing of these services is a function of both the anticipated economic decline or growth from year to year.[8]

Perhaps the most defining feature of the 1994 Session was the amount of state revenue made available to Legislators as a result of the tax surpluses collected during the 1993-94 fiscal year. While pre-session estimates from legislative analysts hovered around the $200 million mark, by Session's end the surplus exceeded $300.[9] As noted by Governor Michael Leavitt in his 1994 State of the State Address, "Never before has our state seen such economic vibrance"....over the past year we have experienced a 12% increase in consumer spending, the fastest job-growth rate in the country, and the second highest growth in personal income among all 50 states.[10] In approving the final $4.5 billion budget, Utah Legislators divided up by far the largest amount of tax-generated revenue in the State's history.[11]

Yet, while such income was welcomed in 1994, revenue surpluses vexed lawmakers as well. This became evident as law-makers wrestled with two key budgetary questions, both political in nature: 1) Given the tax-revenue surplus, how much money does the State of Utah actually need to operate state services for fiscal year 1994-1995? and, 2) How will the money that is allocated to state government for fiscal year 1994-95 be divided among various government bureaus and agencies? Both questions proved to be the focus of much political debate throughout the 45-day Session.[12] In seeking to address each, other defining features of the Session functioned to frame the tone of the debate and answers which would eventually emerge.

To begin with, 1994 was an election year for the Utah Legislature. Of the 105 Utah legislators, all members of the House and 15 members of the Senate were up for re-

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8 A variety of taxes is used to finance federal, state, and local governments. It should be noted, however, that certain types of taxes are more sensitive to changes in the economy than others. This elasticity varies from tax to tax.

9 "Budget Goals Thrown Awry: By Money," Deseret News, March 3, 1994.

10 See Governor Michael O. Leavitt, "1994 State of the State Address," January 17, 1994. See also 1994 Economic Report to the Governor, Salt Lake City, Utah: Office of the Governor, January 1994.

11 See State of Utah: Budget Summary, Fiscal Year 1995 and Fiscal Year 1994 Supplementals. Salt Lake City, Utah: Governor's Office of Planning and Budget, 1994.

12 In many ways, both questions represent classical political dilemmas for policy-makers at various levels of government. These dilemmas are captured and restated in the following questions....."Now that the pie has grown, does it need to be this large? Regardless of the size of the pie, how will it be sliced?"

election. Given that the typical legislator has aspirations of being re-elected, legislators tend to favor and act on those bills which increase their popularity and favorability with politically-active constituents. Hence, the typical legislator seeks to associate him/herself with "good" policy. In a political culture known for its fiscal conservatism, "good" policy is frequently defined as policy which is both effective and efficient, i.e. policy that the public perceives as contributing to the good of the commonweal, policy in which the ratio of resource inputs to outputs is maximized, and policy whose costs present a minimal burden to tax-payers.

In addition to the revenue surpluses enjoyed by the state and the scenario created by election-year politics, talk regarding a state-wide tax cut began more than a month before the opening day of the Session. Conservative republicans in both houses called for "tax relief."[13] Though concerned that tax revenues had increased faster than citizen's incomes in the previous year, Governor Leavitt proved hesitant to endorse such talk. As expressed in his State of the State Address, this hesitancy was rooted in an attitude of cautious optimism regarding the short-term economic vitality of the state. Concerned about the potential closure of Hill Air Force Base by the federal government, the Governor proposed that a portion of the surplus be used to create a "boom buffer" in anticipation of more challenging economic times.[14] In addition, the growing demands and requisite needs faced by various state agencies made the Governor less eager to pursue talk of tax cuts. Echoing this view prior to the opening of the Session, Utah Democratic Party chairman and state representative David Jones (D-Salt Lake) noted, "We need to clearly assess the deficits - the deficits of need - that have built up in public education and corrections before we talk about tax cuts."[15].

To complicate the debate further, a report issued by the Utah State Tax Commission prior to the opening of the General Session concluded that the burden of taxation in Utah favored upper-income households at the expense of the poor and middle classes. Driven by concerns for tax equity and armed with the data from this state-sponsored study, Utah democrats focused their attention on the issue of tax fairness as opposed to tax cuts.

In sum, these emerging issues, tensions, and political currents appear to have defined the larger context in which the 1994 Utah General Legislative Session was conducted: record-setting tax revenues, election-year politics, demands for a state-wide tax cut from a republican-controlled Legislature, democratic concerns for a more equitable tax structure, and an increasing demand for greater resources from various state agencies. Specific educational policies addressed by the Utah Legislature in 1994 should be interpreted against the backdrop of this broader context. Before discussing these specific

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13 "Prediction of $201 million in New Money Prompts GOP to Seek Tax Relief," Deseret News, December 16, 1993.

14 Governor Michael O. Leavitt, "1994 State of the State Address," January 17, 1994.

15 "Legislature: Session Starts January 17," Deseret News, January 9, 1994.

policies, however, an examination of the priorities and agendas of key state educational policy actors for the 1994 Session is in order.

Noted Education Agendas

While normative and idealized theories of democracy are often used in political debate to justify the continued existence of current forms of governance, no clear consensus regarding the control of the policy-making process in various governmental decision-making arenas exits, e.g. Is the policy-making process controlled by an individual, group of elites, a plurality of groups or equally by all who choose to participate in the governmental process? In spite of this lack of consensus, however, it would appear that certain individuals and groups have greater ease-of-access to, and, as a result, exercise more influence over the decision-making process than others. For example, one would expect that the State Superintendent of Public Education would have more influence on educational policy at the state level than the average citizen who holds no public office. Likewise, one would expect an organized, well-financed interest group to have greater access to decision-points than the average citizen.

Having noted this, an understanding of the political agendas of those key individuals or groups who - on the basis of their position, political resources, and/or persuasive abilities - influence the decision-making process in the public and higher education sectors would appear useful. While not intended to be exhaustive, the following individuals and/or groups appear to be influential in the educational policy-making arena at the state level: the governor, the legislature, legislative sub-committees, executive educational bureaus and their chiefs (e.g., state departments of education, state boards of public and higher education, etc.), educational interest groups and issue networks. Though the agendas of each will not be discussed, the agendas of those individuals/groups who have a noted and visible interest in the development of educational policy at the state level will be surveyed.

As has been noted elsewhere, the Governor's influence in the policy-making arena lies primarily in his/her ability to influence the legislative agenda.[16] While control of this agenda is far from complete, the influence of the chief executive in such matters cannot be ignored.[17] This influence is exerted in two primary ways: the high visibility enjoyed by the gubernatorial office; and the Governor's role in the budgetary process. The high visibility of the gubernatorial office affords the office-holder easy access to other key policy makers and the media. When combined with an individual skilled in debate and the art of persuasion, such access can result in a considerable amount of influence. The crucial role played by the Governor in preparing the initial working budget of the

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[16] John W. Kingdon, Agendas, Alternatives, and Public Policies, New York: Harper-Collins, 1984.

[17] It is worth noting that the level of influence and control exerted by the chief executive over the legislative agenda varies across individuals, legislative sessions, legislative arenas, and time.

Legislature allows further influence in the setting of the legislative agenda.[18] While it is rare that all recommendations offered by the Governor are adopted, the allocation of resources found in this initial proposal in many ways reflects the values and priorities of the chief executive. In Utah, the preparation and presentation of this initial budget represents a distinct advantage for the governor.

In the context of the 1994 Utah General Session, the agenda of Governor Michael Leavitt was discernible in both his State of the State address and his proposed budget. Continuing with his theme of taking state government in Utah to a "whole new level of performance," the Governor specifically identified the following aims for his administration: to make "world-class education" the standard in Utah, to build a stronger economy around "quality, high-paying jobs;" to protect as a "precious asset our enviable quality of life;" and to increase the "efficiency and productivity of state government."[19] Noted characteristics of Governor Leavitt's first proposed budget include a total budget recommendation of $4.5 billion - a 9.8% recommended increase in spending ($201 million) over fiscal year 1993-94 - with no tax increases or cuts.[20]

The Governor's education agenda was likewise reflected in the specific recommendations offered in the 1994 State of the State Address and proposed budget. For public education, Governor Leavitt recommended an increase in funding of 6.7% ($1.6 billion) over fiscal year 1993-94. Included in this recommendation were a proposed 4% raise for teachers, an expansion of the highly-touted gubernatorial initiative known as the Utah Centennial Schools Program, additional funding for schools and children at risk, funds for class size reduction in the lower grades, and funds to supplant the elimination of school textbook fees. In addition, and in light of his controversial veto of an educational capital-outlay financing bill passed by the 1993 Legislature, the Governor proposed to remove $4 million worth of sales-tax exemptions to finance the construction of new schools across the state.

The Governor's higher education agenda for the 1994 Legislative Session proved less specific and detailed than his public education agenda. As reflected in his budget proposal, the Governor recommended a budget of $549 million for fiscal year 1994-95: an increase of 8.3% from the previous year. Going into the 1994 Session, two specific concerns in higher education appear to have captured the Governor's attention: increased higher-education enrollment growth and technology. With reference to the former, Governor Leavitt recommended that $9.7 million be directed toward funding this growth. Consistent with a theme established early in his tenure, Governor Leavitt likewise

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18 Though made available in draft form to the Office of the Legislative Fiscal Analyst on a confidential basis, this working budget is presented to the Legislature within three days of the convening of the Legislature in annual general session. See Utah Code Unannotated: 1994, 63-38-2f.

19 All quotations here taken from the 1994 State of the State Address. See Governor Michael O. Leavitt, "1994 State of the State Address," January 17, 1994.

20 See proposed budget, Governor Michael O. Leavitt.

recommended an increase in the state's investment in technology. As captured in a new initiative entitled Technology 2000, an interest was expressed in coordinating the technological and educational efforts of local governments, schools, universities, colleges and the private sector. Toward this end, and with the goal of investing $120 million by the year 2000, the Governor proposed that a $30 million "down payment" be included in the 1994-95 state budget.[21]

While the Governor's primary influence lies in articulating an agenda for the state, it is the legislature who actually sponsors and votes on policy. As in most states, the fundamental division in the Utah Legislature is along party lines. Going into the 1994 Session, the focus of House and Senate Republicans appeared to be on the following issues: tax cuts of various kinds, responsible spending in state government, health care reform, and a renewed articulation and defense of state's rights.[22] In terms of education, the attention of the party focused on such issues as gang violence and school safety, increased funding for programs targeting at-risk students, school fees, and extending the school year to 220 days.[23] Though of the same party, conservative republicans proved tentative in acting on the increased budget recommendations of Governor Leavitt. As noted earlier, Republican talk of tax cuts emerged in late November of 1993 - two months prior to the Session.

The legislative agenda for Utah Democrats was in many ways similar to that of Republicans, yet at the same time distinct. Prior to the opening of the Session, concerns and interests focused on such issues as tax fairness, tax restructuring, and legislative reform, e.g. reform of the work and activities of lobbyists and the operation of House and Senate Rules Committees.[24] Education issues identified by party leaders were rooted in concerns over crime, gang violence, school safety, at-risk students, and underfunded systems of public and higher education. In contrast to state Republicans, Utah Democrats proved fairly supportive of the Governor's budget recommendations.[25]

As the state-executive agencies responsible for the implementation of public education policy in Utah, the political agenda of the State Board and Office of Education must likewise be considered when reflecting on the outcomes of the 1994 Utah Legislative Session. The views and agenda of these agencies were represented in the policy-making process by the work and activities of the State Superintendent of Public Instruction, Scott Bean, and his immediate staff[26]. In examining archival records of the Session, the defining theme of this group was that of increased funding. Frustrated that Utah policy-makers had failed to fund the specific reforms identified in the Utah

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21 Again, see Governor Michael O. Leavitt, "1994 State of the State Address," January 17, 1994.

22 "Legislative Agenda," Deseret News, January 9, 1994.

23 Ibid.

24 Ibid.

25 "Legislature: Session Starts January 17," Deseret News, January 9, 1994.

26 e.g., Deputy State Superintendent Laurie Chivers and Coordinator of School Law and Legislation at USOE, Doug Bates.

Strategic Plan for Public Education, Bean and associates sought resources to adequately fund these proposed reforms. More specifically, additional funding was sought for the following areas: student transportation ($7 million), a comprehensive student guidance program ($3.3 million), teacher in-service training in technology and reform, increased funding for programs for at-risk students, and a 220 School-Day Pilot Program ($1.7 million).[27] In light of this call for increased funding, Republican talk of tax cuts was received rather harshly by officials at the Utah State Office of Education. Speaking a week before the opening of the Legislative Session, Superintendent Bean remarked, "We're prepared to dig in our heels to resist any talk about tax cuts. The pressure to adequately fund the state system [of public education] will not abate."[28] Echoing this frustration, Deputy Superintendent Chivers noted, "For years they've [the Utah Legislature] told us if they had the money, they'd give it to us. They've given us part of the surplus this year, and I hope that's how it will continue."[29]

Though often viewed by lawmakers as a self-interested, reactive organization, the Utah Education Association (UEA) is by far the largest organized teachers' group in the State. UEA's grassroots-level organizational structure and strong funding base have made it a highly visible and consistent political actor in the public education policy arena over the years. Under the dynamic leadership of Lily Eskelsen, the agenda of the Association has focused primarily on protecting and extending the interests of its members. During the 1994 Session, UEA appeared to be preoccupied with four major concerns: increased salaries for teachers, class size reduction, violence and crime in schools, and opposition to talk of statewide tax cuts. In making its case for increased teacher salaries, UEA argued that either the Legislature cut class sizes or that an additional 2% increase above and beyond normal salary raises be given to teachers to deal with "the largest class sizes in the nation."[30] Concerns over school safety were also voiced by UEA. Specifically, UEA proved active in seeking legislation that would give officials more latitude and authority in confiscating weapons found on school property. The Association also lobbied for the creation of stiffer penalties for students who brought such weapons to school and for those perpetrating crimes against educators.[31] Talk of tax cuts by Republicans was aggressively opposed by UEA. In an unusual and controversial move, UEA took to the radio waves in an attempt to pressure lawmakers to use the state's surplus to fund education. Commenting on UEA's stand, Executive Director Lowell

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27 See the following: "Educators Will Pursue Fund for Critical Areas," Deseret News, January 15, 1994; "Time Has Come to Experiment With 220-Day School," Deseret News, January 26, 1994; "Education Bills Aim to Boost Strategic Plan, Deseret News, February 1, 1994.

28 "Legislative Issues," Deseret News, January 9, 1995.

29 "Educators Will Pursue Funds for Critical Areas," Deseret News, January 15, 1994.

30 According to the most recent editions of the Digest of Educational Statistics published by the U.S. Department of Education, Utah has the largest pupil-teacher ratio in the country. See also "Utah Teachers Seek Extra Pay for Class Size," Deseret News, December 10, 1993.

31 Ibid.

Baum noted, "What we're saying to the public and the people of Capitol Hill is that this is the time for us to make a thrust forward to make sure our kids get a break.....UEA thinks it's time to use the [surplus tax] money to fulfill the Strategic Plan for education..."[32]

The agenda for the higher education community in the state during the 94 Session, as given voice by the Utah State Board of Regents and Commissioner of Higher Education, focused on two primary and related issues: increased funding for growing enrollments and technology.[33] It should be noted that both concerns proved consistent with those expressed and targeted early in the Session by Governor Leavitt. Differences between the two agendas, however, were evident in the proposed sources and amounts of these funds. Whereas Governor Leavitt proposed a $549 million budget for higher education in Utah, with $394 million coming from taxes, the Regents made an initial budget request of $571 million, proposing that $411 million be drawn from state taxes. Much of the budget debate focused on ways to efficiently address the needs created by increased enrollments in the system. Consistent with the Governor's call for an investment in technology, the Utah State Board of Regents sought $76 million from the Legislature to build the information highway in Utah. Suggesting that the State invest this over the next four years, the Regents encouraged the Legislature to approve a one time $64 million bond issue to finance the technology initiative for 1994.

While this review of noted education agendas is far from exhaustive, the intent has been to provide one with a sense of those ideas, concerns, and goals held by a select group of policy actors in the public and higher education policy-making arenas during the 1994 Legislative Session. Points of consensus and cleavage are discernible. In the public education sector, for example, school safety issues were of concern in all of the agendas noted here. Likewise, salary increases and the funding of reforms identified by the Utah Public Education Strategic Plan appeared to be high priorities for the general public education community. In higher education, funding for increased enrollments and technology represent priorities identified by the Governor and Utah State Board of Regents. Tensions and disagreements regarding the allocation of resources were evident in both sectors, i.e., in terms allocation targets and levels. Allocation issues were further complicated by the pro- and anti-tax sentiments brewing before the Session. The background provided here is intended to provide a context with which to understand and interpret those specific education policies discussed below.

LEGISLATION: PUBLIC EDUCATION

While a detailed discussion of each specific piece of legislation is beyond the scope of this chapter, a list of approved bills directly affecting public education is found in

32 "UEA Radio Ads Ask State for Surplus," Deseret News, February 14, 1994.

33 "Regents Point to Success of High-Tech Programs," Deseret News, January 27, 1995.

Table 1.[34] Given these limitations, the strategy of presentation employed in this and following sections is to focus on those dominant themes and issues perceived to exist across the entire set of educational legislation. In as much as a specific bill or set of bills is seen as illustrating these perceived themes and issues, the bills are discussed.

Safe and Orderly Schools

Safety for all school personnel was a dominant public education theme for legislators prior to and during the 1994 General Session. A special session of the Legislature was called by Governor Leavitt in October 1993 to deal with what was perceived to be a growing problem in Utah: violent gang activity. By January of 1994, concerns over violence both in and out of schools and its effects on the State had intensified. Such concerns quickly moved center stage, capturing the attention of state lawmakers.

Table 1
State of Utah 1994 General Legislative Session:
Approved Bills Public Education

Bill Number	Title	Lead Sponsor
HB 22:	School Zone Safety Speed	Waddoups
HB 29:	Program for Suggestions by School Employees	Suazo
HB 40:	Blind Persons' Literacy Rights and Education Act	Jorgensen
HB 70:	School District Construction Projects	Haymond
HB 71:	Reauthorization of School Fees Task Force	Lyon
HB 73:	Class Size Reduction Amendments	Evans
HB 93:	Appropriation for Educational Facility	Fuller
HB 97:	Education Criminal Background Checks	Waddoups
HB 100:	Centennial Schools Amendments	Garn
HB 126:	Firearm Safety Education	Haymond
HB 177:	State Board of Education Powers Amendment	Garn
HB 189:	Protection of Students Exchange Student Programs	Atkinson
HB 190:	Expanded Centennial Scholarships	Haymond
HB 204:	Reporting Criminal Activity in Schools	Shepherd
HB 209:	Learning Environments for Public School Students	Garn
HB 212:	Appropriation for Gang Prevention and Intervention Prgm	Short
HB 230:	Reporting Violent Juvenile Offenders to Schools	Shepherd
HB 250:	School and Institutional Trust Lands Management Act	Brown
HB 295:	Teacher Training in Sensory Impairments	Protzman
HB 318:	Mineral Lease Allocation	Johnson
HB 342:	Crimes Against Educators	Shepherd
HB 403:	Utah Family Education Rights and Privacy Act	Bishop

[34] The attention of the reader is called to the adverb "directly" and the ambiguity associated with it. Realizing that there are many bills in each session which indirectly affect the governance structure and process of education, the author has purposely chosen to focus on those pieces of legislation which have a direct and noticeable potential impact on education. Primary attention is given to legislation assigned to the standing Education and Finance Committees in each House. For the 1994 General Legislative Session, copies and descriptions of each of these bills can be found in the House and Senate Journals and the Laws of Utah. Unless otherwise noted, less attention is given to legislation and issues that have been addressed in previous reviews, e.g., State Trust-Lands legislation, State School Board legislation, class-size reduction appropriations, etc.

HB 458:	Appropriation for Partnership with Troubled Youth	Fox
HB 465:	Minimum School Program Act Amendments	Garn
HCR 1:	Individualized Education Resolution	Garn
HJR 15:	State Sch Fund & Uniform School Fund Const. Amdt.	Brown
SB 15:	Public Schools Uniforms	Stephenson
SB 20:	Utah Assistive Technology Foundation Appropriation	Howell
SB 21:	Educational Technology Initiative Amendments	Steele
SB 33:	Orderly School Termination Procedures Amendments	Rees
SB 38:	Penalties for Damaging, Destroying, or Losing School Prop	Steele
SB 41:	Certification of Interpreters for the Hearing Impaired	Richards
SB 42:	Teaching of American Sign Language	Richards
SB 44:	School Fee Waiver Amendments	Steele

In the context of public education, concerns by various educational interests focused on the disruptive effects of recalcitrant students, gang activity, and suspicious school personnel on schooling and the teaching-learning process. By Session's end, no less than 30 bills, each addressing various aspects of the safety issue, had been introduced.[35] Of these, eleven would become law. Three representative bills, each of which addresses various aspects of the safety issue, are presented for consideration below.

Public School Uniforms

Perhaps the most symbolic school safety bill introduced and passed during the 1994 Legislative Session was the Public School Uniform Bill (SB 15-94). As sponsored by the chair of the standing Senate Education Committee, Senator Howard Stephens (R-Draper), SB 15-94 received a great deal of publicity throughout the Session. Specifically, the legislation granted local school boards the authority to adopt a dress code requiring uniforms for students in a given district. As stated in the legislation, SB 15-94 rests on four assumptions 1) that each student should be allowed to learn in a safe environment, free from unnecessary disruptions; 2) that the wearing of certain types of clothing identifies students as members of gangs; 3) that such clothing has contributed to disruptive behavior and violence in schools; and 4) that uniforms will help avoid the disturbances and disruptions of the classroom atmosphere presented by gang clothing.[36]

The lack of consensus between and among lawmakers and the educational community regarding these and other assumptions proved to be the source of heated debate. Opponents to the bill objected on a variety of grounds: the constitutional rights of students; the need to promote diversity as opposed to uniformity; the possible costs for low-income families; and the logistics of enforcement. Speaking against the bill, UEA President Lily Eskelsen identified the costs and constitutional overtones associated with it, "Demanding certain clothing could require school districts to provide waivers for parents who can't afford uniforms.....[further], such demands raise issues of free expression."[37] Phil Oyler of

[35] See Journals of the Legislature of the State of Utah for the year 1994.
[36] See "Public School Uniform Bill: SB 15," Laws of Utah, 1994.
[37] "Legislative Wrap-Up," Deseret News, January 19, 1994.

the Utah Association of Secondary School Principals noted potential problems that the bill would create for teachers and principals, "The policies will pull school officials away from academics to police hallways and fend off complaints from dissenting parents."[38]

In spite of such opposition, however, the bill passed. An examination of the voting patterns in both Houses reveals the lack of agreement among Legislators on the issues. In retrospect, the importance of SB 15-94 appears to lie as much in what it represented than in its actual substance. The bill and ensuing debate point to the inability of simple solutions to fully resolve complex, interconnected problems and issues. Nevertheless, passage of SB 15-94 signals an initial recognition of a problem of growing public concern.

Safe and Orderly Learning Environments

In an attempt to expand the options available to schools for dealing with habitually disruptive students and to foster the development of a safe learning environment in the classroom, the Learning Environments for Public School Students Bill (HB 209-94) was approved by the 1994 Legislature. The bill requires that school districts develop, codify, and distribute student-discipline policies which foster such an environment. As sponsored by Representative Kevin Garn (R-Layton), HB 209-94 allows administrators greater latitude in student expulsion, while at the same time providing for expulsion alternatives which increase the level of responsibility for affected parents. In considering the bill, members of the House Education Committee revealed dual sensitivities.[39] On the one hand, sympathy was shown for teachers whose classes suffer from the continuous disruptions caused by a small percentage of students. On the other hand, in crafting the bill, care was taken by legislators to insure that educators did not allow such students to be prematurely forsaken by the system. Within the context of the larger safe and orderly learning environment theme evident in the Session, HB 209-94 represented an attempt by the Legislature to focus on issues at the classroom level.

Access to Criminal Records, Reporting and Background Checks

Whereas the bills on safe schools noted above focused solely on students, a bevy of bills aimed at increasing the level of safety in schools had as their focus students, teachers, and school personnel. Two bills aimed at helping administrators manage and anticipate student disruptions were passed. The Reporting Violent Juvenile Offenders to Schools Bill (HB 230-94) requires that juvenile courts notify school districts of students convicted of violent weapon offenses. In addition, principals are required to notify law enforcement personnel and school or district personnel who, in the opinion of the principal, should be informed. According to its sponsor, Rep Paul Shepherd (D-Salt Lake), HB 230-94 is a preventative measure, "The bill will help us ensure school and

[38] "School Officials Cool Toward Bill Pushing School Uniforms," Deseret News, February 10, 1994.
[39] Minutes, House Education Standing Committee, Jan 28, 1994.

community safety by identifying those students with violent backgrounds and criminal records. It will allow staff members to create preventive strategies."[40]

Though in agreement with the objectives articulated by Shepherd in the bill, Darrell White, Executive Director of the Utah School Superintendents Association, raised concerns over the liabilities associated with it,....."the problem with the bill is that it hasn't been thought through. If a teacher is informed that there is a violent offender in the classroom and that child injures someone, that could create a liability." To address these concerns, provisions regarding the limited liabilities of such knowledge for involved school and district personnel were included in the bill.

In a second bill aimed at improving the management of school-based violence, the Utah State Office of Education (USOE) was charged with including in its annual Superintendent's report statistical information regarding incidents of delinquent activity in schools (HB 204-94). As of June 1, 1994, specific incidents to be reported are those relating to alcohol and drug abuse, weapons possession, assaults, and arson. The ostensible intent of the HB 204-94, Reporting Criminal Activity in Schools, was to provide USOE with a tracking mechanism for crime. Its passage suggests growing concerns among Utahns over the perceived deleterious effects of increased crime and violence on the quality of public education in the state.

Continuing with the initiatives taken during the 1993 Legislative Session, two bills aimed at screening and dismissing school employees were also passed. The Education Criminal Background Checks Bill (HB 97-94) allows local districts and private schools to subject potential employees and volunteers to a criminal background check as a condition for employment. As sponsored by Michael Waddoups (R-Salt Lake), the intent of HB 97-94 is to prevent child molesters from gaining employment in schools.[41] In this same spirit, amendments to the Orderly School Termination Procedures were also adopted (SB 33-94). To increase the legal authority of the district over school personnel, statutory provisions regarding disciplinary and dismissal actions against teachers were amended and expanded to include all career and provisional employees of the district.[42]

Funding and Finance

Regardless of the policy sector being considered, debates in legislative arenas regarding the allocation of resources are often the most heated and prolonged. As the end of the session in question draws near, the intensity of such debate often increases. Given that well over 40 pieces of legislation relating to public or higher education were passed during the 1994 Session, the opportunities for heated and prolonged debate were many. In the area of public education, three specific issues of education funding and

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40 "Legislator Wants to Keep Tables on Criminals in Utah Schools," Salt Lake Tribune. February 12, 1994.

41 "Whom Legislators Helped, Hurt," Deseret News, March 3, 1994.

42 See Utah Code Unannotated: 1994, 53A-8-102f.

finance are worthy of note: school fees, equalization of capital outlay, and the state income tax dedication.

School fees

During the past several years, few issues have proven more controversial in Utah's system of public education than the school-fees issue. To understand the full import of this issue during the 1994 Legislative Session, one must consider its history. Over the years, public education in Utah has come to rely heavily on the charging of fees to students in secondary schools for various purposes: textbooks, class supplies, extra-curricular programs, etc. The precedent for this practice can be traced back to constitutional and statutory provisions dated as early as 1896 with the establishing of the Utah Constitution. However, only since 1980 has the issue surfaced as a consistent focus of debate at the state level. The last 15 years have seen a dramatic rise in the use of school fees as a revenue source for local schools in Utah. According to Weathers and Crim (1992), the result of this practice has been the emergence of a two-tiered educational system in which low-income children suffer de facto segregation.[43] Concerns over the inequities created by school fees have led to the creation of various taskforces to address the issue. Two recent attempts are worthy of note. In the closing days of the 1985 General Legislative Session, an interim committee was formed to deal with the impact of the policy on low-income students. At the request of this legislative committee, the Utah State Board of Education created a School Fee Task Force. This Task Force was charged with developing a school-fee policy to govern all local-district fee policies and procedures.

The following year and at the recommendations of this interim committee, two school-fee bills were passed by the Utah Legislature. The bills created the following statutory provisions: that local school boards approve all fees that are charged; that fees be waived for low-income students; and, that parents be notified of the waiver guarantee.[44] In that same session, the Utah Legislature passed a Joint Resolution to end the constitutional guarantee of free public education for public education for secondary students, allowing the authorization of fees by the Legislature. Voters approved this constitutional amendment in November 1986.

Since 1986, concerns regarding consistent, fair, and equitable implementation of school-fee provisions have been the focus of considerable and ongoing legislative and legal debate. Proposals ranging from the elimination of all fees to the extension of fees to all grades have appeared. After a series of complaints and litigation by various educational interests, the 1993 Utah Legislature created yet another task force to examine the school fee issue. Co-chaired by Representative Nancy Lyon (R-Bountiful) and Senator David Steel (R-Roy), the Task Force met on a monthly basis during 1993. In

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[43] See Shirley Weathers and Bill Crim, School Fees in Utah: The Law and the Practice. Salt Lake City, Utah: Utah Issues Information Program, Inc., 1992.

[44] These bills were as follows: SB 23-86 and SB 252-86, Laws of Utah, 1986. Also, for a detailed description of these provisions see 1994 Utah Code: Unannotated, 5A-12-102, 103, and 104.

December of 1993, a month prior to the opening of the 1994 Legislative Session, the Task Force recommended to the Interim Education Committee that $3.6 million be appropriated by the Legislature to eliminate textbook fees in Utah. Fearing the political repercussions of such an increase in an election year, the Republican-controlled Interim Education Committee voted against the Task Force's proposal.[45] Reacting to this decision, David Challed, an attorney for Utah Legal Services, Inc. and a member of the Legislative School Fees Task Force observed...."current consternation about fees is the result of an under-funded school system.....We have made administrators bill collectors....The state has doggedly refused to raise taxes to adequately fund education, but fees are taxes that have been raised significantly in recent years."[46]

Debate over the school fee issue prior to and during the 1994 Legislative Session appears to have focused on three major issues: 1) whether schools fees are in reality an unfair head tax that sidesteps the public's obligation to fund education; 2) whether local districts should have the latitude to decide whether waivers should be offered to children who cannot afford them; and 3) whether students should be required to "work off" a wavier through service to the school community or at home.[47] In the end, the 1994 Legislature avoided making a decision resolving the school fee issue. Only two bills related to the issue passed. Under the leadership of Senator David Steel (R-Roy), legislation which requires schools to provide a variety of alternatives for satisfying fee requirements was approved (SB 44-94). In addition, and in spite of the reception of its recommendations by legislators, the School Fee Task Force was reauthorized (HB 71-94). In sum, inaction by the 1994 Utah Legislature on the school fee issue appears to have opened the door for a decision by the courts.

Equalization of capital outlay

In recent years, enrollments in Utah's system of public education have grown at a rate far above the national average.[48] Such growth has not been without its effects. Increased demands have been accompanied by a concomitant increase in the level of resources needed to adequately address growth. Of particular importance is the ongoing need for new school buildings and facilities. Enrollment increases have functioned to intensify this need. The lack of consistent and equitable funding to address this growth has resulted in heated political debates among state policy-makers. At issue are concerns over the state's role in funding such projects at the local level, e.g., How much should the state contribute? How will the state's contribution to local districts be financed? How will the state's contribution be distributed across Utah's 40 school districts?, etc.

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45 See Minutes of the Education Interim Committee, December 15, 1993.

46 "Funding Source May be One for the Books," Deseret News, December 14, 1993.

47 Minutes of the House Education Standing Committee, February 21, 1994; see also "Panel Kills Plan to Allow School Fees," Deseret News, February 22, 1994.

48 See Annual Report of the Superintendent of Public Instruction, 1993-94, Salt Lake City, Utah: Utah State Office of Education, 1994.

In previous years, monies generated at the state level have been set aside to provide financial assistance to local districts in meeting critical school building and debt service needs.[49] While the state's contributions to local districts in this area are much less than in other education programs, contributions to a given district have traditionally been contingent on local tax effort and demonstrated need. Disparities in the level of student enrollment and growth coupled with disparities in assessed property values across districts, however, have resulted in a distribution of funds that is less than equitable.

Several attempts have been made to equalize capital spending across districts. With the goal of achieving a level of equity comparable with that of the state's basic school program, no less than six bills have been sponsored to equalize the capital outlay spending since 1991.[50] Although addressed once again during the 1994 Legislature, by Session's end the equalization issue remained somewhat unresolved. To understand this state of affairs, a review of two pieces of legislation passed in previous legislative sessions are in order.

In the 1992 General Legislative Session, Representative Kim Burningham (R-Bountiful) proved successful in sponsoring HB 65-92: Equalization of Capital Outlay Monies in Public Education. Though later viewed as flawed, HB 65-92 became a law without the signature of Governor Leavitt. In essence, the bill placed the burden of taxation for capital outlay and debt service on wealthier districts by taking money away from those districts whose tax revenues were above the state average and distributing it to districts whose revenues were below the state average. As a "recapture" bill, HB 65-92 was received less than enthusiastically by wealthier districts, legislators in these districts, and Governor Leavitt.[51] Nevertheless, the bill passed. Growing dissatisfaction with HB 65-92, however, led to the introduction of a bill in 1993 designed to supplant the equalization strategy adopted by the 1992 Legislature. As sponsored by Senator Lane Beattie (R-Bountiful), the Education Capital Outlay and Debt Service Bill (SB 199-93) sought to distribute the burden of taxation more equally across the state. Whereas HB 65-92 had placed the burden on wealthier districts, SB 199-93 called for a phased-in, 2-mill property tax levy across all districts.[52] Logistics for the collection and distribution of this property tax were similar to those of the state's income tax. Just as revenues from the income tax are funneled into the Minimum School Program for distribution, so funds

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49 See 1994 Utah Code: Unannotated, 53A-21-101f.

50 These include bills in the 1991, 1992, and 1993 General Sessions and in the 1993 First Special Session. Given that Davis School District is one of the poorer districts in the state (i.e. assessed property valuation per student), it should come as no surprise that the sponsors for five of these six bills have been legislators from Davis County.

51 Districts hardest hit by this so called "Robin Hood Bill," included Salt lake, Murray, Provo, Park City and others. Districts who benefited the most from HB 65-92 include Alpine, Granite and Jordan, Cache, and Weber. See "Utahns Must Share Cost Burden to Provide Education Equity," Salt Lake Tribune, February 25, 1992.

52 See Laws of Utah: 1993, Senate Bill 199.

generated from this 2-mill, statewide tax would be collected and redistributed to needy districts.

Though more equitable in tax-burden than HB 65-92, SB 199-93 was not without its opponents. The Utah Taxpayers Association - claiming that of all legislation considered during the 1993 Session, SB 199-93 had the potential of generating the largest tax increase - fiercely opposed the bill. In addition, Governor Leavitt, who had been elected on a promise of no new taxes, threatened to veto the bill if passed. On the other hand, two influential, locally-based education organizations voiced support for the bill: the Utah School Boards Association and the Utah Superintendents Association. The bill eventually passed. However, as promised, it was vetoed by the Governor.

In anticipation of his decision to the veto the bill, Governor Leavitt commented, "It is the toughest [decision] I've had to make about this Session."[53] Indeed, it was tough. On the eve of the veto, the Governor faced opposition from many sources: USBA, USSA, UEA and the Utah Legislature. The most visible and potentially damaging threat, however, was voiced by teachers in Davis and other counties who threatened to strike if the Governor vetoed the bill. To minimize the damage posed by these threats, Governor Leavitt met with teachers in Davis County to present his alternative to SB 199-93. The strike was eventually called off and a special session called shortly thereafter in March 1993 to address the equalization issue.

Consistent with his promise for no new taxes, the Governor's alternative plan for the financing of capital outlay in education de-emphasized taxes as a source of revenue.[54] Instead, the Governor proposed that the majority of such revenues be generated through the elimination of sales taxes enjoyed by certain businesses and corporations. On the other hand, contrary to his promise of no new taxes, the Governor's proposal did included an annual $5 million property tax provision.

The task of identifying sales-tax exemptions was given to the Utah Tax Review Commission. Whereas the Commission was charged with generating approximately $5 million through the removal of exemptions for fiscal year 1994-95, by the beginning of the 1994 General Session only $3 million in exemptions had been identified. Examining the same issue, and in stark contrast to the recommendations of the Commission, the Legislature's Revenue and Tax Interim Study Committee had identified only $700,000 in exemptions by January 1994. Hesitant in an election year to push the exemption issue too far, both the Commission and Tax Study Committee fell far short of the targeted exemption level prior to January 1994. However, by the end of the Session, over $5 million had been raised through the elimination of selected sales tax exemptions.[55] Thus, exhibiting a great deal of political savvy, Governor Leavitt proved successful at selling

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53 "Governor Should Not Veto School Equalization Bill," Deseret News, March 16, 1993.

54 See SB 1-93SS of the 1993 Utah Legislature, First Special Session, March 1993.

55 See State of Utah: Budget Summary, Fiscal Year 1995 and Fiscal Year 1994 Supplementals. Salt Lake City, Utah: Governor's Office of Planning and Budget, 1994.

his alternative plan to opposing groups and the Utah Legislature, and with what appears to be a minimal amount of political damage. Yet one wonders if this solution will adequately address the equalization problem in Utah. Has the equalization problem been solved? Given the controversial and political sensitivity surrounding the removal of sales tax exemptions, can these exemptions be maintained? These questions remain.

In sum, it would appear that the equalization-of-capital-outlay dilemma will continue to be problematic for public education in the State. As the State moves into the next decade, enrollments in public education will continue to climb. Further, and in light of the record-breaking tax revenues enjoyed by the 94 Legislature, the timing and politics of the sales-tax exemption issue remain somewhat perplexing.

Income Tax dedication

As noted above, increasing enrollments in Utah's systems of public and higher education have resulted in demands for greater funding from each. Given that both vie for state funds, the relationship between executives and leaders in these related sectors has varied over the years.[56] According to Abrams, this relationship has been at times cooperative, competitive, and even conflictual.[57] The dynamic nature of this relationship was once again brought to the fore during the 1994 General Legislative Session when Representative Byron Harward (R-Provo) sponsored a resolution to amend the State's Constitution. On the basis of recommendations made by the Utah Constitutional Revision Committee, Harward's resolution proposed that a section of the constitution that commits all state income-tax revenues to public education be eliminated.[58] Arguing that the tax base of public education was sufficiently diversified to withstand the effects of removing this dedication, Harward's resolution was met with unified opposition from the Utah's public education committee. State Superintendent Scott Bean noted, "We look at the Uniform School Fund as a protection against difficult times. This indeed is not the time to eliminate the Uniform School Fund."[59] Joining Bean in opposing the resolution were representatives from the Utah's PTA, UEA, and the Utah School Boards Association. Proponents of the bill argued that removing the dedication would give state lawmakers added flexibility in making allocation decisions.[60]

Though the resolution eventually died in committee, its appearance on the agenda in this and past Sessions and its emergence as a topic of discussion in various policy-making arenas perhaps point to its growing relevance as an issue. Policy-makers in the higher education policy community have consistently voiced concerns about the need for

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56 It should be noted that these two sectors, i.e., public and higher education, are only two of many public sectors which depend on and compete for state revenues for continued maintenance and growth.

57 Douglas Abrams, Conflict, Competition, or Cooperation: Dilemmas of State Educational Policymaking. Albany, NY: State University of New York Press, 1993.

58 1993 Utah Code: Unannotated, 53A-16-101. See also Constitution of the State of Utah, Article XIII, Section 3.

59 Minutes of the House Revenue and Taxation Committee, February 1, 1994.

60 "School-Tax Proposal Survives," Deseret News, February 3, 1994.

greater funding. More specifically, income tax revenues have been identified by this community as a potential and consistent funding source. Growth in the revenues generated by the income tax in recent years have functioned to increase its attractiveness. As the demands on Utah's system of higher education increase, a rethinking of the income-tax dedication provision is likely to re-emerge as an issue in the near future. The unified opposition displayed by the public education community, however, suggests that the debate on this issue between the public and higher education communities will generate additional controversy and debate.

Substantive Educational Reform

Legislators entertained few new and radically innovative educational reform proposals in 1994. Given the needs of public education and record-setting tax revenues, this proved somewhat surprising. The most notable reforms considered during the Session are offered below.

Centennial Schools

As the centerpiece of the Governor's educational agenda, the Centennial School Program (CSP) was launched by the Utah Legislature during Mike Leavitt's first year in office (1993). So named to commemorate Utah's upcoming centennial year of statehood, CSP has been hailed as the means to push public education to a "whole new level of performance."[61] As such, the Centennial Schools concept remains the center piece of Governor Leavitt's educational reform thrust. Four key organizing principles lie at the heart of the CSP: decentralization of governance via site-based decision making, innovation, strategic planning, and outcome-based education.[62] In addition, the Utah State Office of Education has promised to waive existing educational and procedural policies which inhibit a local school's effort to innovate and restructure.

Of the State's 716 schools, ninety-seven (13.5%) were chosen by the Utah State Office of Education to participate in the program for the 1993-94 year. Moving into the 1994 General Session, Governor Leavitt expressed both approval and concerns about the progress of CSP, "We've clearly opened the track of innovation. We still need to be more bold.....The cross-pollination [of ideas and innovations] that I hoped for has begun. People are seeking out information and trading ideas."[63] Commenting on the Centennial School proposals reviewed in the initial year of the program, Larry Horyna, Coordinator for Planning Efforts at USOE noted, "The Centennial School Proposals [received this

61 See Michael O. Leavitt, "1993 State of the State Address," January 17, 1993.

62 For a detailed discussion of the Centennial Schools Program see Bob L. Johnson, Jr. and David J. Sperry, "The 1993 Utah Legislative Session: Policy Implications for Educational Structure and Governance," Utah Education Policy Center Yearbook, 1993-94.

63 "Centennial Schools are Key Part of Leavitt's Push to Bring 5-year Plan into Classrooms," Deseret News, January 30, 1994.

year] haven't been futuristic enough.....Few schools have asked for dispensation of rules from the state."[64]

While accounts of the progress of individual CSP schools have received widespread attention, educators and policy-makers in the state appear to recognize that it is far too early to assess the success and effects of the program in Utah. Nevertheless, with the intent of continuing and expanding the program into the 1994-95 academic year, the 1994 Legislature appropriated an additional $4.3 million in seed money for CSP. Include in this appropriation were funds for an additional 100 Centennial schools.

220-Day School Year

Experimentation with a 220-day school year represents a second reform addressed and funded by the 1994 Utah Legislature. Going into the Session, it is recalled that this initiative was a key agenda item of the State Superintendent of Education, Scott Bean, and the USOE. Testifying before the House Education Committee, Bean articulated two objectives for his proposal: to get students through the system in less time; and to provide schools with the greater opportunity to ground students in the basics, thus preparing more adequately for the post-high school experience.[65]

Legislation regarding the 220-Day proposal was sponsored by Representative Kevin Garn (R-Layton) as HB 102-94, Experimental and Developmental Monies for Public Education. Opposition to the bill focused on two fronts. Members of the Public Education Subcommittee expressed concerns about the funding issues associated with program success. Discerning the link between potential pilot success and the pressure to fund the program statewide, certain members of the Committee saw HB 102-94 as an uncomfortable and costly proposition.[66] This opposition, however, stands in contrast to that offered by the Utah Eagle Forum. Under the leadership and lobbying efforts of President Gayle Ruzicka, HB 102-94 was attacked for its "anti-family" overtones. In the words of Ruzicka, "It's a very anti-family bill that takes the children out of the home. It's the parents' responsibility to take care of the children, not the schools."[67]

Recognizing the power wielded by the ultra-conservative Forum and unwilling to engage in a fight on the House floor, Garn abandoned the bill half-way through the Session. "We could have passed it out [of committee], but it wasn't worth the fight," Garn noted.[68] However, the issue did not die. In a politically motivated, slight-of-hand move, republican lawmakers saved the pilot by including it as a part of the larger Minimum School Program Bill (HB 465-94). As such, HB 102-94 represents one of the

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64 Ibid.

65 See Minutes of the House Standing Committee on Education, January 24, 1994.

66 "Education Bills Aim to Boost Strategic Plan," Deseret News, February 1, 1994.

67 "School-Year Bill Flunks Lobby's 'Family' Test," Salt Lake Tribune, February 2, 1994. See also Minutes of the House Standing Committee on Education, January 24, 1994.

68 Ibid.

few radically different and novel public education reform proposals considered and approved by the 1994 Legislature.

LEGISLATION: HIGHER EDUCATION

Consistent enrollment growth in Utah's nine colleges and universities provides the context for understanding many of the issues and debates which have emerged in the state's higher education community in recent years. Much like the scenario in the public education sector, enrollments in Utah's system of higher education have consistently increased since 1985. As noted in Table 2, the student higher-education population in the state rose to 75,805 for the 1993-94 academic year. This number represents an increase of almost 20,000 students over the 1985-86 academic year. Going into the 1994 Session, higher education officials anticipated this number to climb to approximately 80,000 by the fall of 1994.[69] Such figures represent an increase of approximately 4,000 students over the previous year.

Table 2
Utah System of Higher Education Enrollment History and Projections: 1980-2000 Fall FTE Enrollments

Year	Resident	Non-res	Total
Actual			
1980-81	42,134	7,904	50,038
1981-82	43,743	7,349	51,092
1982-83	46,599	6,819	53,418
1983-84	48,921	6,416	55,337
1984-85	48,643	5,831	54,474
1985-86	48,617	5,515	54,132
1986-87	50,065	5,290	55,355
1987-88	50,964	5,334	56,298
1988-89	51,395	5,244	56,639
1989-90	54,355	5,672	60,027
1990-91	56,899	6,646	63,545
1991-92	62,569	7,082	69,651
1992-93	65,551	7,673	73,224
1993-94	68,021	7,782	75,805
Projected			
1994-95	70,722	8,592	79,364
1995-96	71,488	8,319	79,806
1996-97	74,342	8,319	82,671
1997-98	77,333	8,319	85,651
1998-99	82,208	8,319	90,527
1999-00	85,147	8,319	93,466

Source: Utah System of Higher Education Data Book, 1994-95. Salt Lake City, Utah: Utah State Board of Regents and Commissioner of Higher Education, 1994.

69 "Utah's Increasing Enrollments at Colleges Defy national Trend," Deseret News, January 22, 1994.

Concern among lawmakers over the state's ability to sustain this growth appears to have been a dominant issue in many higher education debates in 1994. This would appear to be the case, in spite of the healthy tax surplus enjoyed in the Session. While a list of the approved bills relating to higher education can be found in Table 3, the legislative proposals highlighted below hint directly or indirectly at this larger concern. Whether reflected in efforts to develop an advanced system of information technology or in efforts to increase system accountability (i.e., through an increase in professorial teaching loads and the publication of university salaries), a consideration of the more notable bills and decisions debated in the Session points to efforts to deal with this dilemma.

Table 3
State of Utah 1994 General Legislative Session:
Approved Bills for Higher Education

Bill Number	Title	Lead Sponsor
HB 11:	Utah Valley Community College Name Change	Tanner
HB 68:	Information Technology Commission	Brown
HB 181:	Government Records Amendments	Stephens
HB 295:	Teacher Training in Sensory Impairments	Protzman
HB 458:	Appropriation for Partnership with Troubled Youth	Fox
SB 189:	Higher Education Capital Projects	Blackham
SB 253:	Higher Education Engineering Initiative	Ockey

Funding of Enrollment Growth and Urgent Student Support

Arguments for additional funding to accommodate enrollment growth in higher education centered on two primary areas in 1994: determining the precise number of FTE students to be funded and urgent student support. Based on projected enrollment growths for the coming year, the Board of Regents requested that the Legislature fund growth for an additional 4,401 students (FTE enrollments). Consistent with past decisions, however, the legislature failed to fund growth at the requested level. Instead, enrollment growth was funded for 3,317 students (82% of the requested level). Debates over enrollment funding lead to sharp disagreements between the legislative fiscal analyst's office, legislators, and Commissioner Foxley over the specific methods used to calculate projected enrollments. "Projected growth is not an exact science," noted Commissioner Foxley in her testimony before the Joint Higher Education Appropriations Subcommittee.[70] "Enrollment has not been fully funded for several years now. Although FTE is down at the U, head-count is up over 300. Revenues are needed to address this need...."

In addition to enrollment-growth funding, the Utah Board of Regents requested $4.3 million for "urgent student support" to address enrollment-related expenses not covered by enrollment funding. Legislators, however, proved reluctant to fund this request.

[70] Minutes of the Joint Higher Education Appropriations Subcommittee, January 28, 1994.

Taking cues from the Legislative Fiscal Analyst's Office, debate ensued as to the precise meaning of "urgent student support".[71] Whereas the Fiscal Analyst's office sought a precise definition of the budget category for the purposes of tracking compliance, Commissioner Foxley encouraged the subcommittee to keep the language of intent flexible so that emergent needs could be addressed as needed at each of the nine higher education sites in the state. In the end, $3 million was allocated for urgent student support for the specific purposes of expanding student counseling services, increasing financial aid opportunities for students, purchasing additional instructional equipment, and increasing library staffing and acquisitions.[72]

Technology

Although discussed here in the context of higher education, technology was also an issue of note in the public education sector in 1994. Perceived as an important means of increasing the efficiency and quality of educational delivery, the technology issue was an agenda item for many key policy actors prior to and during the Session, e.g., Governor Leavitt, Utah Board of Regents, and the State Board and Office of Education. It was the Governor, however, who proved to be the prime mover on the issue in 1994. The technology issue has been a consistent gubernatorial theme throughout Leavitt's short tenure. As rearticulated in his 1994 State of the State Address, it remains the Governor's primary means of taking government in Utah to "a whole new level of performance."[73] Evidence for the priority of this issue is seen in it's order of appearance in the 1994 State of the State Address and in recommendations regarding the allocation of resources....."I begin tonight by addressing a critical need to keep our state's positive momentum: advanced technology. I am more convinced than ever that our future depends on how well and how fast we adapt to the information ecosystem.....It will change our state's public investment patterns. Public schools, higher education, and state agencies must begin to redirect part of what they are spending on traditional bricks and mortar to technology."

With the sun setting on the Educational Technology Initiative (ETI)[74], Governor Leavitt presented his specific ideas on technology to the 1994 Legislature in the form of a new initiative: Technology 2000.[75] Claiming that an investment in the program would increase the efficiency and coordination efforts of government and education in the state, the Governor's asked the Legislature for $120 million over a five-year period to finance

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71 Minutes of the Joint Higher Education Appropriations Subcommittee, February 2, 1994.

72 State of Utah: Budget Summary, Fiscal Year 1995 and Fiscal Year 1994 Supplementals. Salt Lake City, Utah: Governor's Office of Planning and Budget, 1994.

73 Michael O. Leavitt, "1994 Utah State of the State Address," January 17, 1994.

74 As established by House Bill 468 by the Utah Legislature in 1991, the Education Technology Initiative (ETI) is a five-year program designed to.....

75 See Michael O. Leavitt, 1994 Utah State of the State Address, January 17, 1994.

what many perceived to be his number one legislative priority.[76] Specifically, a down payment of $30 million was requested for fiscal year 1994-95.[77]

Proposals and requests of the Utah State Board of Regents and Utah State Board of Education proved less aggressive. Pointing to the success of the high-tech programs in its system, the Regents sought funding for technology in the amount of $76 million.[78] In sharp contrast to both of these request, the state's public education community asked for an infusion of $10 million to fund the final year of ETI.[79]

Regardless of the source, proposals for technology funding were met with mixed emotions and quickly became the source of heated political debate among Legislators. Criticisms from lawmakers clustered around two major issues. First, certain legislators noted the proliferation and lack of coordination of technology proposals. Concerned over the amount of funding funneled into ETI since 1990 and the perceived deficiencies in coordination and oversight associated with these funds, demands for greater coordination and control emerged. Second, proposals were criticized as being ideas without plans. This was particularly true of the Governor's proposal. Technology 2000 was criticized specifically as "an idea with no plan."[80] Acting on cues provided by the Legislative Fiscal Analyst's office, legislators balked at appropriating funds for programs perceived to lack clear goals and coordinated efforts.[81]

The cumulative effect of these and other criticisms was the emergence of bill designed to coordinate the state's effort in building the information highway in Utah. As sponsored by Representative Mel Brown (R-Midvale), HB 68-94 created the Utah Information Technology Commission (ITC). Several broad charges were given to the 19-member ITC; these are listed in Table 4[82]

Table 4
Administrative Charges Utah Information Technology Commission
HB 68-94 - Information Technology Commission (Source: Laws of Utah, 1994)

1.	To study Utah's present and future information technology needs.
2.	To make recommendations regarding the coordination and governance of the information technology needs for all branches of state government.
3.	To solicit and consider recommendations by all branches of government regarding information technology.

76 "Is 'Highway' Destined to Be Dirt Road?", Deseret News, February 24, 1994.
77 Ibid.
78 "Regents Point to Success of High-Tech Programs," Deseret News, January 27, 1994
79 "Educators Will Pursue Fund for Critical Areas," Deseret News, January 15, 1994.
80 See Minutes of the Higher Education Appropriations Subcommittee, January 26, 1994. See also, "Is 'Highway' Destined to Be Dirt Road?"
81 "Is 'Highway' Destined to Be Dirt Road?"
82 See HB 68, Information Technology Commission, Laws of Utah, 1994???

4. To consider the scope of the Public Service Commission's authority to regulate information technology.
5. To consider issues of economic development with regard to information technology.
6. To receive reports from the three branches concerning expenditures and appropriations for technology requests
7. To make recommendations for appropriations regarding information technology to the Executive Appropriations and subcommittees of the legislature.
8. To prepare legislation concerning information technology.

As can be deduced from these charges, the work of ITC is broad and far-reaching. One questions the ability of any single body to address all in a reasonable and adequate manner. Further, the specificity of charges suggests the existence of a perceived need among law-makers to exercise a greater level of coordination and control over the development of the informational technology system in Utah. The political implications of such an effort are manifold. Given the evolving technology, size, and unequal development of information systems across governmental sectors, intra- and inter-sector power struggles are likely.

Moving into the final week of the Session, neither the Governor nor the higher education community had received the requested appropriations for technology. The Governor's request was cut in half by lawmakers and the Higher Education Appropriations Subcommittee had denied the Regents $19 million request.[83] Attempting to influence legislators in his own party and garner additional funding, Governor Leavitt paid his first visit of the Session to GOP caucuses in both Houses. In an impassioned speech Leavitt noted, "Technology will allow us to resolve all of our other problems." He urged lawmakers to change their problem-solving methods and look to technology as the solution in all areas of government.[84] In addition, he asked the Republican legislators to lift money out of the "caucus money pool for pet projects" and give it to his technology initiative.[85] As a result, the Governor was able to generate $2.5 million in revenue from general obligation bonds. Yet while successful in recovering a portion of lost funding, the Governor found himself $7 million short of his requested $29 million. Likewise, the appropriation of $9.1 million to the higher education community fell far short of $19 million in requested funding.

Professorial Teaching Loads

For the second year in a row, teaching loads in higher education emerged as an issue in the Utah Legislature. Motivated by the dual concerns of efficiency and quality, a bill

83 "Is 'Highway' Destined to be Dirt Road?", Deseret News, February 24, 1994.
84 "Legislative Update," Deseret News, February 25, 1994.
85 Ibid.

aimed at requiring professors to teach 12 to 18 hours a week was drafted in 1994. According to supporters, the intent of the bill was to save approximately $16 million a year in faculty salaries by requiring professors to spend more time in the classroom.[86] In addition, the bill was designed to increase the availability of professors to students.

Arguing that its sponsors were ill-informed as to the problems facing higher education and that the intent of the bill was mis-directed, members of the higher education community expressed unified opposition to the bill. Opposition focused on two issues: 1) the essence of the proposal itself; and 2) the perceived encroachment of Legislative authority in its attempt to micro-manage Utah's System of Higher Education. "It's not a good idea to have the Legislature running the educational system of Utah," Weber State University Professor Lyall Crawford explained.[87] Likewise, Bartell Jensen, vice president for research at Utah State University noted, "Leave the management to the school president. It's always a problem when you have too many managers."[88]

Much like a bill sponsored by Senators Howard Stephensen (R-Draper) and Scott Howell (D-Salt Lake) in the 1993 (SB 45-93), the bill disappeared early in the Session. Its disappearance may be attributed in part to the lobbying efforts of individuals and groups associated with the powerful and highly visible higher education community. Nevertheless, the reappearance of this issue on the legislative agenda in 1994 suggests perhaps a growing discontent with institutions of higher education in Utah as well as a growing demand for greater accountability in this area of state government.

Reporting of Professorial Salaries

A second accountability-related bill considered and approved by the 1994 Utah Legislature was the amendment offered to the Utah Government Records Access and Management Act (GRAMA). As proposed by House Majority Leader Marty Stephens (R-Farr West), HB 181-94 was designed to repeal the disclosure exemption enjoyed by higher education. While the wages of other tax-supported positions in the state have been public information for over 15 years, Utah's nine colleges and universities have not been required to publicly disclose employee salaries.[89] System and school officials have long argued that such secrecy protects the privacy of employees. In addition, it has been argued that such secrecy increases the latitude of administrators in hiring new employees.[90]

In sponsoring HB 181-94, however, Stephens noted both the inconsistency of the higher education exemption with the spirit of GRAMA and the obligations and accountability associated with agencies financed by the citizens of Utah. He further noted that Utah is the only state that has failed to fully disclose the salaries of university

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86 "Legislative Fetters-Vex Professors," Salt Lake Tribune, January 2, 1994.
87 Ibid.
88 Ibid.
89 1994 Utah Code: Unnannotated, 63-2-207f.
90 "Utahns May Learn What Profs Make," Salt Lake Tribune, March 12, 1994.

and college employees.[91] While system officials argued against releasing names with salaries, the work of Stephens with Cecelia Foxley and college and university presidents prior to the vote on HB 181-94 resulted in little opposition from this community. One compromise reached as a result of discussions, however, exempts nonstate-funded compensation from disclosure. From a public-constituency perspective, it would appear that HB 181-94 can be interpreted within the larger context of moves to increase accountability in the system.

SUMMARY, REACTIONS AND CRITIQUE OF THE 1994 UTAH LEGISLATIVE SESSION

While the educational issues and legislation considered in this review have been necessarily selective, it is argued that such legislation is representative of the larger educational concerns and tensions which defined the 1994 Utah Legislative Session. A selective summary of what the 1994 Legislature did for public and higher education is offered in Table 5. The emergence of these and other issues, however, must be interpreted within the political context of the Session. This context was defined by an array of givens and tensions: unanticipated, record-setting tax revenues; election-year politics; demands for tax relief from a republican-controlled, fiscally-conservative Legislature; demands for tax equity from democratic leaders; aggressive gubernatorial leadership; and the existence of demands created by the deficit-needs of various state agencies.

In many ways, public and higher education fared quite well during the 1994 Session. Both received healthy budget increases. This was undoubtedly the result of the rosy financial condition of the experienced in 1994. For the first time in state history the legislative budget for public education topped the $1 billion mark. Funding for the basis education program rose by more than $100 million to an all-time high of $1.345 billion.[92] Included in this allocation were $15.5 million for class-size reduction in grades K-3, $4.3 million for the Centennial Schools Program, $1 million for the Educational Technology Initiative, $4.5 million for a 220-day school-year pilot program, and an increase in the WPU from $1,539 to $1,608. In addition, the House and Senate reached a compromise that provided teachers with a 4.5% salary increase.[93]

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91 "Legislative Issues," Deseret News, January 9, 1994.

92 See HB 465-94, Laws of Utah, 1994.

93 Although the 1994 Legislature authorized and funded a 4.5% for teachers in public education, actual raises were negotiated separately with teacher unions in Utah's 40 school districts. Thus, given that local districts in Utah have the right to negotiate local contracts, not all teachers received raises of 4.5%.

Table 5
What the 1994 Utah Legislature Did for Public and Higher Education: Selective Summary

Public Education	Higher Education
- allocated over $1.348 billion to Minimum School Program, (6.8% increase over FY 93) - increased the WPU from $1,539 to $1,608 - authorized for a 4.5% pay increase for teachers - allocated over $15 million to class-size reduction in grades K-3 - passed several bills aimed at increasing safety in and around schools - allocated $4.3 million toward continuance and expansion of the Centennial Schools Program - allocated $4.5 million for an experimental 220-day school year pilot program - failed to allocate funds to eliminate textbook fees - provided alternatives for paying school fees for low-income families - repealed $11 million in sales-tax exemptions with approximately $6 million of this allocated to the equalization of capital outlay in education - created a new management system for the State's School-Trust Lands - created a Task Force to study the Property-Tax issue in Utah - allocated $1 million to the Educational Technology Initiative	- allocated over $544 million to the Utah System of Higher Education (increase of approximately 9.2% over FY-93) - gave faculty and staff a 4.5% pay increase; 6.5% to Snow College and College of Eastern Utah - allocated $9.1 million to development and training for information technology system - created an Information Technology Commission to study the technology issue and make recommendations to state government. - appropriated $2.99 million to the Urgent Student Support Program - amended GRAMA to require disclosure of salaries for university professors - issued $75 million in building bonds for projects on various campuses. - allocated $1 million to purchase site in Davis County for college - funded student enrollment FTE growth at 82%, i.e. 3,317 students

For the first time in many years, hearty approval towards Legislative decisions was expressed by members of the public education community. Commenting on the 4.5% authorized pay increase for teachers, State Superintendent Scott Bean noted, "It's one of the best years we've had in a while. It was really good to see them [the Legislature] approve more than a mere cost-of-living raise. For several years, they've said they'd do that when they had the money and they've kept their word."[94] Noting the bills passed to

[94] "Session Delivers a Little Something for Everyone in Public Education," Deseret News, March 3, 1994.

increased safety in schools and the voted increase of teachers' salaries, UEA President Lily Eskelsen remarked, "It's been a win year for education[95].....better than we've had in a while. But you have to remember, we've had some dismal years."[96]

Although not funded at the levels requested, the Utah System of Higher Education likewise received a healthy budget increase for fiscal year 1994-95. The 1994 Legislature allocated $544 million to higher education, an increase of approximately 9% over FY 93-94. Included as a part of this larger appropriation were faculty and staff pay raises of 4.5%, funding for 82% of anticipated student-enrollment growth (i.e., for 3,317 FTE students), a $9.1 million appropriation for technology, $3 million to the Urgent Student Support Program, $1 million for the purchase of land in Davis County for higher education expansion, and $1 million to pay legal bills accrued in the anti-trust suite filed against the University of Utah. In addition, the following expenditures for higher education were included as a part of the general-obligation bond projects approved by the 1994 Legislature: $13.5 million for the final renovation of the Marriott Library at the University of Utah, $5.6 million for the Administration and Student Center Building at Southern Utah University, $3.9 million for the Student and Administrative Building at Snow College, $2 million for purchase of the Signetics building for Utah Valley State College.

Expressing concern over unfulfilled budget requests, Utah State Board of Regents spokesperson, Patricia Crane observed, "We came out with more dollars than last year, but there were disappointments too."[97] Disappointment with the Legislature was likewise expressed by Commissioner of Higher Education Cecelia Foxley over appropriations made for technology. Whereas the Regents had requested $76 million over four years for technology, only $9.1 million in one-time money was appropriated by lawmakers. "We'll do as much as we can with it," said Foxley. "But we have to do more with distance learning, if we're to reach rural Utah more effectively and do more joint work with high schools."[98]

Given these legislative decisions, several observations can be made about the work of the 1994 Utah Legislature. In terms of general appropriations, lawmakers authorized by far the largest increase in governmental spending in the State's history. The budget passed for fiscal year 1994-95 represented a $500 million increase over 1993-94 fiscal year. In terms of specific appropriations, (as noted above) both public and higher education sectors greatly benefited from this increase. Considered together, appropriations for both sectors accounted for approximately 50% of the State's budget for FY 94-95. Yet while increases of smaller increments across sectors would appear to be the norm in times economic growth, the proportional increases approved by the 1994

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95 Ibid.

96 "Quotes and Quips Sum Up the 94 Session," Deseret News, March 3, 1994.

97 "Legislative Update," Deseret News, March 4, 1994.

98 "$9.1 Million Jump-Starts Information Highway," Deseret News, March 3, 1994.

Legislature are somewhat ironic. Such increases appear to be at odds with a GOP-dominated Legislature known for its ideological and fiscal conservatism - record tax revenues notwithstanding.

Commenting on the effects of unanticipated revenues on the Legislature's budget and budgeting process, Senate budget chairman LeRay McAllister (R-Orem) observed, "In my 20 years here, we've never had that kind of an increase in spending."[99] Expressing concern and mild disgust over the political maneuvering and pork-barreling associated with excessive revenues, Senator John Holmgren (R-Bear River City) noted, "This year's budget has more Christmas trees and smoke and mirrors than I've ever seen!"[100] Of equal concern and interest, however, are the political implications of revenue growth for state politicians. As noted in the Governor's State of the State address, tax receipts in Utah have in recent months increased faster than citizens' incomes.[101] Given the dominant political culture, philosophy, and view of government in the State, this represents a potential problem. If such a trend continues, resolving this dilemma will be a critical issue for lawmakers in coming years. Nevertheless, it spite of the political implications of this dilemma and the state's conservative fiscal reputation, the 1994 Utah Legislature appeared to enjoy rolling in the dough.

In addition to rolling in the dough, it is worth noting that much like the 1993 Session, Governor Mike Leavitt witnessed success in realizing most of his legislative agenda, particularly in education. Having now experienced two legislative session as governor, Leavitt has proven remarkably successful at selling his agenda to lawmakers. In 1993, the Legislature quickly and unanimously adopted his Centennial Schools Program - the cornerstone of his educational reform policy. As noted above, support for the continuance and expansion of this program was reflected when the 1994 Legislature increased appropriations to the program by approximately $2 million. Likewise, Leavitt proved politically bold, astute, and successful in 1993 at vetoing legislation aimed at equalizing capital outlay in public education, going against the wishes of the Legislature and UEA and supplanting the bill with an idea of his own. Though the details of this plan were still being addressed in the 94 Session, the political fallout from his veto and proposal has been minimal. In addition, Leavitt has proven effective at garnering the necessary resources for his technology agenda. Through persistence and political maneuvering, he was able to identify pockets of revenue during the 1994 Session to fund a large portion of his $29 million request.

Reflecting on this record, three factors appear to have played a role in Governor Leavitt's success to date: timing, revenues, and initiative. The existence of record-setting tax revenues at the state level would appear to be a factor working in the Governor's

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[99] "Budget Goals Thrown Awry by Money," Deseret News, March 3, 1994.

[100] "When Asked to Share Wealth With Poor, Utah Legislators Turn Into Scrooges," Salt Lake Tribune, March 5, 1994.

[101] Governor Michael O. Leavitt, "1994 Utah State of the State Address," January 17, 1994.

favor. Reason suggests that the probabilities for an elected official's political success are greater in times of munificence than in times of scarcity. The existence of the surplus witnessed in 1994 led to healthy budget increases for most state agencies. In this sense, Leavitt enjoys an advantage not afforded his two predecessors: Norm Bangerter and Scott Matheson. In addition to these factors, the initiative shown by Leavitt in pushing his agenda forward appears to be a third element contributing to his success with the Utah Legislature. In his short tenure as Governor, Leavitt has exhibited a leadership style that is strategic, intense, determined, and focused. While the favorability of success is perhaps greater in times of economic expansion, this favorability is increased for the official who exhibits a proactive and aggressive leadership style. Given these factors, the probabilities of Leavitt's continued success in this area appear to be quite favorable.

Yet in spite of record setting revenues, healthy budget increases, and gubernatorial success with the legislature, it would appear that the 1994 Legislature did little in terms of innovative and substantive reform. Instead, the Legislature seemed content with maintaining the status quo, opting for incremental increases in existing programs and agencies. In this sense, lawmakers avoided serious reform. Windfall revenues provided lawmakers the opportunity to fund many of those strategic and innovative educational reform measures adopted three years earlier by the Legislature in the progressive and visionary Strategic Plan for Public Education. Instead, the 1994 Legislature opted for business as usual, but at higher spending levels. Record setting revenues provided legislators with an opportunity to relive stress in several critical areas of public and higher education. Instead lawmakers chose to offer a tax cut that proved more symbolic than substantive.[102]

To be sure, budget increases in both sectors were much needed and welcomed. Further, such increases proved to be politically expedient. In spite of these increases and this expediency, however, it would appear that many critical needs remain in both public and higher education. In light of the high pupil-teacher ratio which exists in Utah's system of public education, more funds could have been appropriated by the 1994 Legislature for class-size reduction. The pupil-teacher ratio in Utah remains the highest in the nation. Likewise, as a means of innovatively addressing the educational needs of the state, lawmakers could have proven more visionary in their funding of technology in both public and higher education sectors. As noted earlier, appropriations for technology in higher education were funded at levels much lower than those requested. In addition, Governor Leavitt was forced to "go to the mat" on several occasions in seeking needed funds for his Technology 2000 initiative - a proposal which potentially has great promise. Equally as perplexing is the school-fees issue. As noted earlier, the Interim Legislative Task Force on school fees recommended to the Legislature that an appropriation of $3.6 million be made to eliminate the use of textbook fees. This proposal, however, was

[102] The much publicized one-eighth cent sales-tax cut was little more than a token. Such a cut amounts to a savings of approximately $6 per year off the average family grocery bill.

rejected early in the Session. Instead, legislators opted for the one-eighth cent (approximately $23 million in potential state revenue) sales-tax cut. While the needs articulated here are in no way meant to be exhaustive, they are offered as examples of some of the needs which appear to remain in Utah's public and higher education systems.

It has often been said that times of plenty reveal the priorities of a governing body as much as times of want. The late Governor of Utah and master of political operations, Scott Matheson, is noted as saying that the more money the Legislature has, the more difficult the session will be.[103] If in fact these observations are valid, one is led to consider the priorities reflected in the actions and decisions of the 1994 Legislature. Without a doubt, this Legislature found itself in unfamiliar territory. The dilemma created by record-setting tax revenues - that of determining how to slice a larger pie - certainly proved to a source of vexation to lawmakers. Though unfamiliar, however, lawmakers did proceed to divide up the largest pile of taxpayer cash it had ever seen, approving a $4.5 billion budget. What can be said of this? To this observer, the budgeting philosophy and allocation decisions made by the 1994 Legislature are consistent with the larger conservative political culture of the state.[104] Such decisions reflect a satisfaction with and desired maintenance of the status quo in state government. The across-the-board, incremental budget increases approved by the 1994 Utah Legislature coupled with the election year tax-cut nod reflect a business-as-usual view of government. Yet while such an approach is politically expedient in that "everyone gets something," it fails to address the long terms needs of the state. In the context of public and higher education, the failure to pursue a more long-range agenda in the allocation of resources results in temporary fixes at the expense of long-term needs. Short term, political demands are addressed at the expense of the more deeply-rooted needs of the state's educational infra-structure. Rather than granting across-the-board, incremental budget increases, the 1994 Legislature could have proven more adept at allocating resources more strategically. While such an approach is perhaps less expedient in a political sense, it would appear that allocating resources in this manner would function to: 1) buffer to a degree the effects of future economic fluctuations on the state's education systems; 2) prevent the creation of expectations among state agencies and citizens that can't be maintained; 3) allow the state to invest in those areas of education innovation and reform that are seen as most promising and productive. While the short-term outlook for the continued growth of state revenues is promising, the uncertainty presented by the more distant future suggests that the state be more strategic in its investments in public and higher education. Given the value afforded education by the citizens of Utah and in light of the decisions made by the 1994 Utah Legislature, this would appear to be a reasonable suggestion for Utah policy-makers in the coming years. Two useful starting points for this strategizing are found in the Utah Strategic Plans for Public and Higher Education.

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[103] Quoted by Bob Bernick, long-time political columnist for the Deseret News. See "Prediction of $201 Million in New Money Prompts GOP to Seek Tax Relief," Deseret News, December 16, 1993.

[104] For a detailed discussion of the political culture and values of Utah State Government see

A Report and Analysis of Funding for Highly Impacted Schools
By Patrick Galvin

INTRODUCTION

The proposal for a school finance formula which supports highly impacted schools has its most recent origins in the work of Utah's School Finance Task Force. Commissioned by the Legislature in 1989 this task force reviewed Utah's school finance formula. Dr. John Bennion, then Superintendent of Salt Lake School District, and others reported to the commission their views about the need for such a formula at that time. Six years later the work has come to fruition.

In 1995, the State Legislature appropriated 4 million dollars stipulated for students in highly impacted schools.[105] One hundred and seventy-six schools from 27 school districts applied for the competitive funding offered through this legislation. Schools from 13 school districts did not apply.[106] Forty schools where finally chosen for funding: on average these schools will receive an additional 100,000 dollars for instructional services. This amounts to an additional 250 dollars per student for support services. There are many innovative and site specific needs educators could address with this money to improve performance, the Senate bill for Highly Impacted Schools legislation requires that the money be used to reduce pupil teacher ratios.

"Highly impacted schools" is a phrase generally used to describe urban schools that operate with an increasingly diverse, mobile, and economically disadvantaged set of students who often have limited proficiency in English. The fact of the matter, however, is that rural educators address similar problems. Indeed, many of the schools funded through this legislation were rural.

THE POLICY ISSUE AND QUESTION

This paper serves two purposes. First, the paper describes the details of the legislation and the procedures by which allocations were distributed to targeted schools. This section of the paper provides readers with a description of the legislation and a description of the resultant allocations. The second purpose is to explore the question: what can be expected from investment of additional state dollars in highly impacted schools. The implicit, if not explicit, assumption of the legislation is that if highly impacted schools receive additional resources to support instructional activities then students ought to learn more then they would otherwise. Currently, schools in Utah vary both in terms of the level of resources allocated for instructional services and in measures

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[105] The original bills (House Bill 0172 Sponsored by Shirely Jensen; Senate Bill 0231 Sponsored by Scott Howell) proposed funding this legislation at 5.2 million.

[106] The 13 districts included: Beaver, Garfield, Grand, Juab, Millard, Morgan, No. Summit, Park City, Piute, Tintic, Wasatch, Wayne, and Logan.

of performance -- the performance data from the Statewide Assessment Program is used in this study. Thus, if one controls for socio-economic factors like income, these data enable one to assess whether educators in Utah who operate with more resources are able to promote more learning among their students. The results of these analyses provide the means by which one can predict the expect effect of additional resources allocated to highly impacted schools.

THE LEGISLATION AND FUNDING FORMULA

The allocation for highly impacted schools was 4 million dollars for the 1995-96 school year. In accordance with the legislation, the State Board of Education developed a formula for distributing the funds based on the following five conditions:

> (2) the board, in consultation with the governor's office, shall base its determination of highly impacted schools on the following criteria as reported by the schools in their applications:
>
> a) high student mobility rates within each school;
>
> b) the number and percentage of students at each school who apply for free school lunch;
>
> c) the number and percentage of ethnic students at each school;
>
> d) the number and percentage of limited English proficiency students at each school; and
>
> e) the number and percentage of students at each school from single parent families. (Senate Bill 0215, 1995 Legislative Session)

In March of 1995, the State Office of Education sent out applications for the funding to all of Utah's schools. One-hundred and seventy-six schools returned applications, which is about 24 per cent of the schools in the state.[107] For each school applying for the aid, the combined scores for the 5 criteria determined their "eligibility coefficient."[108] The 40 schools with the highest eligibility coefficients were then selected for funding.

Funding was comprised of two parts: (1) a base allocation of 30,000 dollars, regardless of the size or need of the school and, (2) an impact allocation which divided the remaining 2.8 million dollars proportionately, relative to the total number of students, among the 40 schools. The later allocation requires additional explanation. The calculation for the impact allocation relied on several factors. First, each school's eligibility coefficient was calculated by multiplying the number of students enrolled by their eligibility coefficient. These products were summed (for the 40 schools) and then each school received its proportional share of the 2.8 million dollars of impact aid. A

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[107] A small number of applications were not accepted, specifically from alternative high schools and from late applications.

[108] The ranking were standardized using a multiplicative function so that the school with the highest percentage, for any single criteria, was assigned the score of 100. The "adjustment factor" was then used to transform each schools percentages into a number ranking. These adjusted factors were then added to derive each school's eligibility coefficient.

school's total allocation was then the sum of the base allocation and its impact allocation. Table 1 displays summary results of the criteria by which each of the 40 funded schools.

The structure of the formula ensured that those schools with the highest measure of need (relative to the five criteria specified by the legislation) were those funded. Not clear is whether the schools funded are those with low SAT scores and high class sizes.

Table 2 displays the summary statistics for achievement on the Statewide Assessment Program for 3 sets of schools: (1) those that did not apply for funding (n=516); (2) those that applied by where not funded (n=134); and; (3) those that applied and were funded (n=39, one school did not have an SAT score listed). Generally the results show that the 40 schools funded by this legislation are among the lowest scoring schools in the state. These schools are not exclusively low scoring, one school ranked in the 56th percentile range. Nonetheless, on average for the 40 schools funded by this formula is in the 24th percentile rank. The average score for the schools applying for the funding but not receiving it is in the 45th percentile rank.

Table 1
Comparison of SAT Achievement Scores (Percentile Ranks)
by Schools Funded with High Impact Aid With Those Not Funded (1994-95)[109]

	Mean	Std Dev	Minimum	Maximum	N
Those Schools that did not apply	53.42	12.96	3	96	516
Schools that applied but where not funded	45.22	12.46	6	92	134
Schools funded by Legislation	24.82	10.67	4	56	39

The above evidence suggests that the formula developed by the Utah State Office of Education both complies with the intent of the legislation and captures poor performing schools. A similar analysis comparing pupil teacher ratios reveals that the schools funding by the Highly Impacted Schools legislation have some of the lowest pupil teacher ratios in the state. The average pupil teacher ratio of the highly impacted schools funded by the legislation is 20 students per teacher as compared to 24 students per teacher for the state.[110] In fact, 7 of the 40 schools operate with fewer than 15 students per teacher.

One of the reasons pupil teacher ratios are so low in the highly impacted schools is that federal and state programs support these students. Providing additional funds, which require these schools to reduce pupil teacher ratios, is intended to free teacher time for more individualized instruction. The intention of investments in resources, time and expertise is to affect the performance of students. In the following section, existing data from state sources is used to examine the relationship between increased funding and reduced pupil teacher ratios with measures of student achievement.

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[109] Normed percentile ranks are not interval data and technically should not be treated as such. The purposes of the report in this section is more illustrative of trends. The regression analysis presented later in the paper used raw data standardized as Z-scores.

[110] Teacher is defined in this calculation to include all certified instructional staff, resource teachers, and interns. The calculation is determined simply by dividing the number students (ADA) by the number of Full Time Equivalent Teachers

Table 2: Formula By Which Aid For Highly Impacted Schools Was Distributed

District (1)	School (2)	Total Allocation $ 4,000,000 [=Col.4+Col.5] (3)	Impact Allocation $ 2,800,000 [=Col.6 x Col.18 x $2,800,000/ Sum of Col.17] (4)	Base Allocation $ 1,200,000 (5)	Eligibility Coefficient [=Col.8 + Col.10 + Col.12 + Col.14 + Col.16] (6)	Ethnicity Adjustment Factor = 1.0163		Free Lunch Adjustment Factor = 1.0937		LEP Students Adjustment Factor = 1.0719		Single Parent Adjustment Factor = 1.5394		Mobility Adjustment Factor = 1.3776	
						% [=Col.22 Col.18] (7)	Factor [=Col.7 x 1.0163x100] (8)	% [=Col.21 Col.18] (9)	Factor [=Col.9 x 1.0937x100] (10)	% [=Col.23 Col.18] (11)	Factor [=Col.11 x 1.0719x100] (12)	% [=Col.24 Col.18] (13)	Factor [=Col.13 x 1.5394x100] (14)	% [=Col.19 Col.20] (15)	Factor [=Col.15 x 1.3776x100] (16)
SAN JUAN	Whitehorse HS	$95,992	$65,992	$30,000	358.7	95.8%	99.4	84.8%	92.4	82.6%	88.5	33.2%	51.1	34.3%	47.5
SAN JUAN	Bluff Elem	$57,453	$27,453	$30,000	355.6	90.7%	92.2	91.4%	100.0	86.4%	92.6	21.4%	32.9	27.5%	37.9
SAN JUAN	Montezuma Creek Elem	$91,274	$61,274	$30,000	355.0	98.4%	100.0	76.0%	83.1	93.3%	100.0	29.1%	44.8	19.7%	27.1
SAN JUAN	Monument Valley HS	$75,357	$45,357	$30,000	350.0	96.2%	97.8	78.3%	85.6	74.0%	79.3	34.9%	53.7	24.4%	33.6
SAN JUAN	Mexican Hat Elem	$82,315	$52,315	$30,000	347.5	97.8%	99.4	89.0%	97.3	87.5%	93.8	22.0%	33.9	16.8%	23.1
OGDEN	Lewis Elem	$99,130	$69,130	$30,000	346.3	71.3%	72.5	85.9%	93.9	40.1%	43.0	50.0%	77.0	43.5%	59.9
OGDEN	Dee Elem	$137,174	$107,174	$30,000	338.0	59.0%	60.0	87.8%	96.0	24.0%	25.7	63.8%	98.2	42.2%	58.1
SALT LAKE	Lincoln Elem	$132,768	$102,768	$30,000	316.4	63.7%	64.7	80.6%	88.2	25.5%	27.3	52.5%	80.8	40.2%	55.4
SALT LAKE	Jackson Elem	$117,532	$87,532	$30,000	303.5	57.7%	58.6	70.4%	77.0	34.4%	36.9	45.3%	69.7	44.5%	61.3
UINTAH	West Middle School	$62,647	$32,647	$30,000	297.5	59.8%	60.8	76.9%	84.1	42.7%	45.8	53.8%	82.8	17.4%	24.0
SALT LAKE	Edison Elem	$114,120	$84,120	$30,000	296.2	68.3%	69.4	73.0%	79.8	24.9%	26.7	46.4%	71.4	35.5%	48.9
SALT LAKE	Franklin Elem	$99,277	$69,277	$30,000	294.9	70.7%	71.9	64.8%	70.9	35.9%	38.5	34.3%	52.8	44.1%	60.8
UINTAH	Todd Elem	$83,042	$53,042	$30,000	282.9	68.2%	69.3	82.4%	90.1	55.3%	59.3	36.5%	56.2	5.8%	8.0
TOOELE	Wendover HS	$99,174	$69,174	$30,000	280.0	68.8%	69.9	40.0%	43.7	61.4%	65.8	31.9%	49.1	37.4%	51.5
OGDEN	Mountain View Elem	$75,716	$45,716	$30,000	272.7	46.1%	46.9	76.3%	83.4	18.1%	19.4	51.0%	78.5	32.3%	44.5
GRANITE	Granger Elem	$125,134	$95,134	$30,000	268.3	25.0%	25.4	38.1%	41.7	14.6%	15.6	63.9%	98.4	63.3%	87.2
TOOELE	Ibapah Elem	$33,069	$3,069	$30,000	265.0	71.4%	72.6	71.4%	78.1	0.0%	0.0	57.1%	87.9	19.2%	26.4
SALT LAKE	Mountain View Elem	$102,646	$72,646	$30,000	264.0	63.3%	64.3	66.9%	73.2	24.8%	26.6	40.3%	62.0	27.5%	37.9
SALT LAKE	Whittier Elem	$98,665	$68,665	$30,000	257.8	42.9%	43.6	59.4%	65.0	14.5%	15.5	47.8%	73.6	43.6%	60.1
SALT LAKE	Glendale Intermediate	$115,523	$85,523	$30,000	255.5	53.4%	54.3	61.6%	67.4	26.2%	28.1	40.9%	63.0	31.0%	42.7
SALT LAKE	Parkview Elem	$123,408	$93,408	$30,000	254.1	54.4%	55.3	65.7%	71.9	19.9%	21.3	29.2%	45.0	44.7%	61.6
PROVO	Joaquin Elem	$99,925	$69,925	$30,000 ***	253.1	33.9%	34.5	61.9%	67.7	30.9%	33.1	29.9%	46.0	52.1%	71.8
SALT LAKE	Bennion Elem	$114,993	$84,993	$30,000	249.8	47.0%	47.8	54.9%	60.0	17.3%	18.5	37.8%	58.2	47.4%	65.3
JORDAN	Midvale Elem	$120,641	$90,641	$30,000	249.8	51.1%	51.9	68.5%	74.9	22.0%	23.6	32.4%	49.9	35.9%	49.5
OGDEN	Central Middle	$122,424	$92,424	$30,000	248.3	43.3%	44.0	67.7%	74.0	11.6%	12.4	46.7%	71.9	33.4%	46.0
GRANITE	Moss Elem	$110,376	$80,376	$30,000	237.0	17.9%	18.2	34.5%	37.7	3.3%	3.5	50.4%	77.6	72.6%	100.0
GRANITE	Lincoln Elem	$89,896	$59,896	$30,000	235.1	21.4%	21.7	46.5%	50.9	2.4%	2.6	42.0%	64.7	69.1%	95.2
SALT LAKE	Backman Elem	$98,346	$68,346	$30,000	230.8	49.7%	50.5	59.6%	65.2	22.7%	24.3	33.9%	52.2	28.0%	38.6
SALT LAKE	Washington Elem	$103,296	$73,296	$30,000	224.9	34.9%	35.5	51.1%	55.9	28.1%	30.1	41.1%	63.3	29.1%	40.1
SALT LAKE	Rose Park Elem	$113,181	$83,181	$30,000	223.8	39.8%	40.4	51.0%	55.8	24.5%	26.3	33.4%	51.4	36.2%	49.9
GRANITE	Redwood Elem	$94,173	$64,173	$30,000	220.4	37.9%	38.5	62.5%	68.4	14.0%	15.0	24.8%	38.2	43.8%	60.3
JORDAN	Copperview Elem	$98,884	$68,884	$30,000	218.0	20.1%	20.4	33.3%	36.4	7.0%	7.5	35.4%	54.5	72.0%	99.2
SALT LAKE	Meadowlark Elem	$107,007	$77,007	$30,000	215.5	51.7%	52.5	43.4%	47.5	21.9%	23.5	28.9%	44.5	34.5%	47.5
GRANITE	Granite Park JHS	$140,725	$110,725	$30,000	212.7	22.2%	22.6	49.8%	54.5	5.5%	5.9	33.3%	51.3	56.9%	78.4
GRANITE	Granite HS	$146,172	$116,172	$30,000	211.3	17.6%	17.9	39.9%	43.6	5.5%	5.9	44.9%	69.1	54.3%	74.8
PROVO	Franklin Elem	$90,220	$60,220	$30,000	208.8	23.7%	24.1	48.8%	53.4	17.6%	18.9	27.0%	41.6	51.4%	70.8
PROVO	Maeser Elem	$84,342	$54,342	$30,000	205.3	28.8%	29.3	46.5%	50.9	16.3%	17.5	28.1%	43.3	46.7%	64.3
OGDEN	Edison Elem	$79,781	$49,781	$30,000	204.7	26.5%	26.9	66.4%	72.6	20.6%	22.1	28.8%	44.3	28.2%	38.8
SALT LAKE	Riley Elem	$63,042	$33,042	$30,000	204.5	45.7%	46.4	50.9%	55.7	10.6%	11.4	30.7%	47.3	31.7%	43.7
PROVO	Timpanogos Elem	$101,161	$71,161	$30,000	202.9	19.3%	19.6	47.3%	51.7	7.2%	7.7	26.9%	41.4	59.9%	82.5
	TOTAL OR AVG	$4,000,001	$2,800,001	$1,200,000	$ 258	45.6%	46.3	59.1%	64.6	24.3%	26.0	38.7%	59.6	44.5%	61.3

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THE ANALYTICAL FRAMEWORK FOR PREDICTING EFFECTS

The legislation written for this funding proposal is not long, only one page. Nonetheless, the underlying assumption motivating the policy seems clear: the provision of additional revenue sources to educators offers them the means by which to provide students new or enhanced learning opportunities, the effects of which should be evident in test scores.

Most legislative appropriations for education are allocated directly to districts; district administrators are then responsible for distributing those funds to schools according to specified criteria. By contrast, the aid for highly impacted schools is delivered directly to the school. Predicting the effect of additional money on measures of school performance requires expenditure data specified at the school level. Unfortunately such data is not available except at the district level. To look at the relationship between varying expenditure levels for instruction and performance measures it will be necessary to use district aggregated data. It is difficult to make inferences from the results of district level analyses about the relationship of school level resource on measures of performance. Thus, it is necessary to shift the unit of analysis to the school level.

Pupil teacher ratios are used to examine how variations in instructional resources at the school level affect measures of performance. One virtue of using this resource measure over dollars per pupil, is that the Highly Impacted Schools legislation stipulates that the funds must be used to reduce pupil teacher ratios. However, the results of the analysis will not let one quantify the effect of more money directly because the cost of teachers and aides is not the same in all districts or schools. Nonetheless, the results are relevant.

Conceptually, there is still a problem with predicting the effect of reduced pupil teacher ratios on measures of performance. District expenditures for instructional support vary among Utah's 40 districts. Thus, as one attempts to examine the relationship between pupil teacher ratios and measures of performance at the school level, there exist at the district level different resource pools supporting the activities of teachers in schools. As a practical illustration of the point, one could imagine two classes otherwise identical in every respect (pupil teacher ratios, etc.) except for the fact that one operates in a district where instruction is funded at $5,000 per pupil while the other class operates in a district supporting instruction at $2,000 per pupil. Making statements about the relationship between variations in pupil teacher ratios and measures of performance only make sense controlling for differences in the resource pools in which schools (teachers in classrooms) operate.

In other words, what we really want to know is if reductions in pupil teacher ratios are strongly associated with increased performance at the school level, keeping in mind that the level of funding supporting instructional services varies from district to district.

Such an analysis is especially problematic for conventional regression analysis because the data at one level of analysis (the school) is strongly related to the data at the next level of analysis (the district). Such data violate the assumption of independence necessary for conventional regression analysis. The appropriate method for analyzing these kinds of problems is called Hierarchical Linear Modeling (HLM) (Byrk & Raudenbush, 1992). This statistical method enables one to say something about the effect of reducing pupil teacher ratios while controlling for differences in expenditure levels. Conversely the analysis lets one say something about the effects of more money while controlling for differences in pupil-teacher ratios.

Before reporting the results of the HLM analysis simple correlational studies are reported for district level expenditure data and measures of performance. Then the same analysis is conducted to examine the relationship of school level pupil teacher ratios and measures of performance. Co-variates are introduced to control for differences in socio-economic factors, which are widely known to "explain" much of the variance in school achievement data. The results of these data help introduce the results of the HLM analysis reported later in the paper.

SOURCE OF DATA

The four categories of data collected and used in this study. The financial data was extracted from the Utah State Office of Education, Superintendent's Annual Reports, F4 reports, especially from the combined Revenues, Expenditures, and Changes in Fund Balances Sheets, 1989-90 to 1993-94.

The performance data was collected from the reports distributed by the Utah State Office of Education from the annual Statewide Assessment Program. These data are those collected from the annual assessment test given to 5th, 8th and 11th graders in the fall quarter. The performance measure used is the Basic Battery Score. In some cases these scores are reported as percentile ranks. In the regression analysis the percentile rank scores are not appropriate and hence the raw scores for each grade level are standardized (relative to their respective grade level) as z-scores.

Some census data was included in the data base. These data were extracted from the Common Core Of Data complied by the national Commission of Educational Statistics, and the data complied and distributed by the MESA group out of Washington DC.

Finally, data for individual schools were collected from documents available through the Utah State Office of Education (for example, enrollments and Full time faculty data were collected from the Annual School Directories).

REPORT OF FINDINGS

District level analysis: expenditures and measures of performance

Expenditures, among Utah's 40 school districts, vary considerably for instruction and instructional support services. During the 1993-94 school year, these expenditures

ranged from a minimum of 2,653 dollars per pupil to a maximum of 7,732 dollars per pupil. This is a range of more than 5,049 dollars. The average expenditure for instruction this year was 3,603 with a standard deviation of 1,050 dollars per pupil. These figures suggest that within Utah there exists a significant variation in expenditures for instruction. Assuming these differences are consequential they should correlate positively with evidence of student achievement.

Measures of student achievement for the districts were determined by averaging the Basic Battery Score (the percentile rank score, which is nationally normed) for all participating classes in a district. In some cases this only included 3 scores. In other districts it included more than as many as 88 scores. Such variations in the number of schools within a district can greatly affect an average score if within a small district one score is particularly high or low. Nonetheless, these scores are the actual results and, hence, the averages are a reasonable way of summarizing a district's performance with a single number.

The aggregated scores for Utah's forty districts ranges from 30.9 to 66.5: that is a range of more than 35 points. The mean score for the aggregation of 40 districts was 50.7, with a standard deviation of 6.9. These data suggest that district performance within the state varies sufficiently so that if a positive correlation with expenditures for instruction exists it ought to be evident.

The Evidence of Relationships at the District Level

The correlation between expenditures per pupil for instruction and the measure of performance used in this study is not strong, neither is it positive: $r = -0.158$ (Data used was from the 1993-94 school year). This means that, in general, the average aggregated score achieved by students in districts spending more money is less than that for students in districts spending less for instruction.

One assumes that such a correlation reflects that those districts with a higher percentage of students with special needs receive more money to compensate for those needs. When the correlation is run controlling for the percentage of the student body population identified as living in families with income below the poverty line, the results show that more money is positively associated with measures of performance: $r = +0.173$.

While the direction of the correlation controlling for socio-economic factors is consistent with what policy makers might hope, that more money is positively associated with higher levels of performance, the statistic does not reflect a strong nor statistically significant relationship. Generally, the findings provide no substantial evidence that supports an expectation that, given current practices, increases in funding for instruction and support will lead to a systematic and significant improvement in measures of performance via the Statewide Assessment Program.

School Level Studies

In this section the analysis shifts attention from an examination of district level to school level data. The question examined is whether reduced pupil teacher ratios are

associated with higher achievement scores. This question strikes at the heart of the assumption guiding the Highly Impacted Legislation and its funding. The analysis begins first with a simple bivariate correlation between average pupil teacher ratios within schools and their respective performance scores on the Statewide Assessment.

On the average, Utah's schools operate with about 23.3 students per instructional staff member, with a standard deviation of 4.4 pupils per teacher. While some schools reported fewer than 6 students per teacher, or more than 45 students per teacher, these outliers have been from the analysis in this report because they are such exceptional cases and not germane to the general trends of interest. Since the 1990-91 school year the average pupil teacher ratio in the state has fallen by one; from 24.2 to 23.3 in the 1993-94 school year.

The definition of teacher included any of the following instructional staff members: teacher, interns, resource teachers and aides. This definition of teacher is appropriate because the schools receiving money from the Highly Impacted Schools legislation will likely hire staff from a variety of categories.

Extensive variation exists among schools[111] reporting scores on the Statewide Assessment Program. In the 1993-94 school year the average ranked score for all 689 schools included in this analysis was 50.2. The standard deviation around this mean was 14.5 percentile ranked points. In other words, about 67% of the scores for schools fell between the percentile ranked scores of 35.4 and 64.7. On average, the scores for all schools have fallen slightly over time but the significant point with regard to this analysis is that there exists considerable variation around the means--such variation is necessary to perform the correlation of interest.

Correlating the pupil teacher ratios with performance on the Statewide Assessment test in the 1993-94 school year indicates that the association between the two variables is positive but not strong: $r = +0.12$. The Statewide Performance test is conducted in the Fall and, consequently, the scores of 1994-95 were corrrelated with the pupil teacher ratios of the 1993-94 school year. The timing of the SAT test makes these complications inevitable.

The Evidence of Relationships at the School Level

The results of the analysis indicate that as the number of pupils per teacher goes up so to do measures of performance. These associations are weak and of little consequence in terms of overall effect.

When controls for socio-economic status are introduced into the correlation the effects are minimal: $r = +0.05$. This is interesting since the correlation between percentage of families identified as low income within a school and measure of performance is moderate ($r = -0.54$). What this correlation means that even when

[111] classes within schools really, recall the SAT assessment test is administered to 5th, 8th and 11th grade classes within schools.

controlling for socio-economic factors the effect of increased pupil teacher ratios on measures of performance is non-existent.

One possible explanation for such a finding is that variations in funding at the district level are confounding patterns of association at the school level between pupil teacher ratios and measures of performance. In the next section this hypothesis is examined directly.

THE REGRESSION MODEL: HLM

HLM involves performing regressions of regressions. The regressions are done first at the lowest unit of analysis and then within the next higher unit of analysis. Thus, for this study, ordinary least squares is first used to summarize the relationship between school performance on the Statewide Assessment Test and pupil teacher ratios. The intercepts and coefficients in these equations usually vary randomly across schools. These randomly varying intercepts and coefficients are then used as the dependent variables in second level regression equations with, in this case, districts as the unit of analysis and district characteristics as the independent variables.

The initial model is very simple, although additional control variables were added with subsequent analyses:[112]

1.School Level Variables
- Statewide Assessment Test score (dependent variable);
- Pupil/Teacher Ratio.
- Percentage of Families Identified as Low Income

2.District Level Variables
- Per Pupil Expenditures for Instruction.

Performance is modeled at the school level within each district as a function of pupil/teacher ratios. Besides simplicity, another reason the number of independent variables is kept to a minimum is that many of the district level cases have so few school level cases. Precise estimates of the coefficients being pursued require sufficient degrees of freedom for calculations, which with additional independent variables would not be possible in those districts with relatively few cases (recall that some districts have only 3 or 4 school level scores while other districts have as many as 88 scores).

The model results in an equation for each district that consists of regression coefficients estimating the effect of pupil/teacher ratios on performance. The equation

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[112] Level-1 Model
SAT Score = INTRCPT1 + B1*(PRTAVG) + B2*(LINCPCT) + R
Level-2 Model
INTRCPT1 = G00 + G01*(INST9394) + U0
PRTAVG = G10 + G11*(INST9394) + U1
LINCPCT= G20 + G21*(INST9394) + U2

also estimates an intercept, which represents the average predicted performance of each school.

In the next step of the analysis, the intercept and Beta coefficients from the school level analysis become the dependent variables in the between-level (or district) model. These between district equations produce coefficients (called Gammas in HLM) that estimate the effect of each district level variable (in this case per pupil expenditures for instruction) on the average performance of schools with varying pupil teacher ratios.

These Gamma coefficients, from the between district equations, are the major indicators of district effects (per pupil expenditures for instruction) on achievement, controlling for variations in pupil teacher ratios at the school level.

HLM Level 1 Regression Statistics

Table 3: HLM Level 1 Regression Coefficients

	Centered Intercept	Slope PRTAVG	Slope LINCPTM
1 Alpine	0.547	0.033	-0.019
2 Beaver	0.252	0.205	-0.057
3 Box Elder	0.237	0.049	-0.010
4 Cache	0.416	-0.068	-0.027
5 Carbon	-0.343	0.080	-0.002
6 Daggett	-0.445	-0.022	-0.050
7 Davis	0.109	0.123	-0.066
8 Duchesne	-0.500	0.015	-0.045
9 Emery	-0.306	-0.044	-0.015
10 Garfield	-0.295	0.061	0.008
11 Grand	-0.324	0.002	-0.022
12 Granite	-0.132	0.009	-0.063
13 Iron	-0.005	0.111	-0.028
14 Jordan	0.289	-0.022	-0.065
15 Juab	-0.096	-0.034	-0.002
16 Kane	0.048	0.248	-0.024
17 Millard	0.219	0.068	-0.029
19 Nebo	0.395	0.026	-0.003
20 No. Sanpete	-0.609	0.095	-0.009
22 Park City	0.870	-0.395	0.259
23 Piute	0.670	0.347	-0.006
24 Rich	0.657	-0.127	0.177
25 San Juan	-2.019	0.487	-0.008
26 Sevier	-0.214	-0.077	-0.021
27 So.Sanpete	0.028	0.047	-0.011
28 So.Summit	0.227	-0.086	0.053
29 Tintic	-0.560	0.070	-0.051
30 Tooele	-0.474	0.024	-0.025
31 Uintah	-0.532	-0.013	-0.053
32 Wasatch	0.139	-0.135	-0.042
33 Washington	0.208	0.060	-0.023
34 Wayne	-0.250	0.435	0.042
35 Weber	0.164	-0.033	-0.030
36 Salt Lake	-0.259	-0.099	-0.063
37 Ogden	-0.858	0.038	-0.050
38 Provo	0.301	-0.205	-0.047
39 Logan	0.817	-0.015	-0.060
40 Murray	0.460	-0.127	-0.047

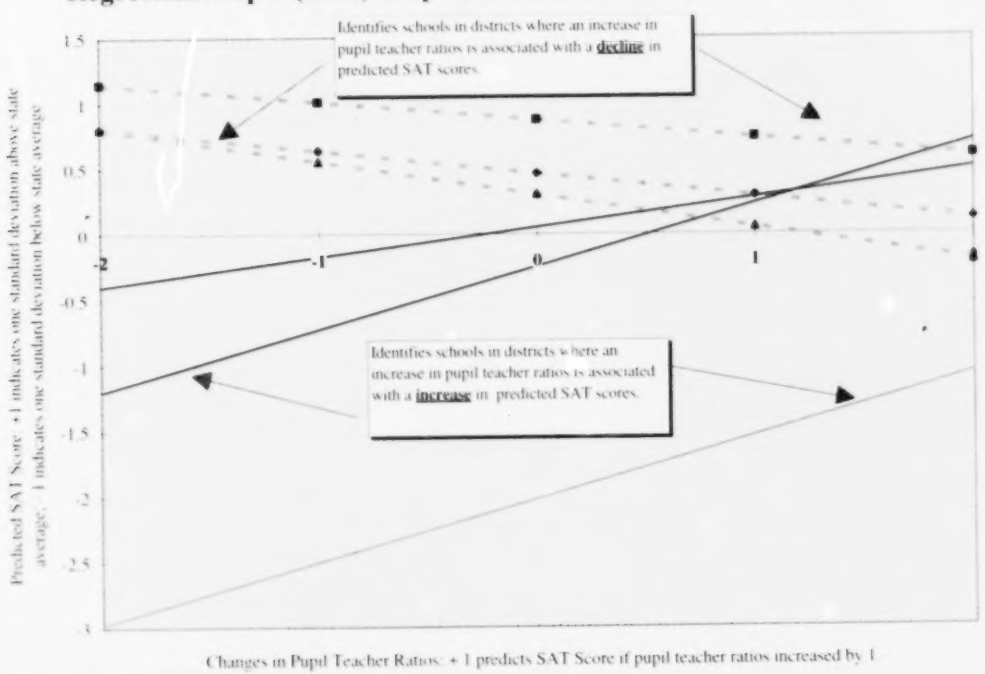
The logic underlying the use of hierarchical linear models is that the nature of social organization is such that individuals work within groups and that the properties of the group influence the capacity of individuals to function. Thus, schools operate within the structure of districts; just as students operate within the umbrella of a classroom, or classrooms are systematically influenced by the structure of the school in which they are housed. This is hardly an esoteric issue but rather one that is common to most people who think about the problems of evaluating schools. Consider for example two teachers of otherwise identical ability, teaching in different schools, who are being evaluated by the same evaluator. Judgments about their competence that fail to consider school environment in which they work and the differences in students whom they teach are certainly suspect. Similarly, when educators judge the performance of two schools without considering the organizational context in which they operate they fail to consider systematic factors that help explain variance in performance. The logic of HLM regression helps highlight these otherwise ignored influences and avoid the

pit falls of thinking too simply about complex matters.

As noted above the first analytic step in HLM analysis is a regression of level 1 factors, which in this case is the regression of pupil teacher ratios on measures of performance at the school level.[113] The results of the analysis return an intercept and a set of regression coefficients for 38 of the 40 districts (two districts had insufficient data for the regression). The intercept is the predicted average level of performance given the average pupil teacher ratios for schools within the districts. The coefficients define the direction and magnitude of changes in pupil teacher ratios on performance.

One of the findings obvious from the presentation of results is that the relationships between pupil teacher ratios and performance vary in sign (direction of effect) and magnitude (the slope) between districts. This point is graphically illustrated in the line graph presented in Figure 1 below. School Performance is scaled on the Y-axis (the scores have been standardized to account for differences in raw scores between 5th, 8th and 11th grade scores). The X-axis is the scale for pupil teacher ratios. The "0" mark indicates the average pupil teacher ratio for schools within any particular district. Thus, the "+1" indicates an increase in pupil teacher ratios (such as 20/1 to 21/1); a "-1" indicates a decline in pupil teacher ratios (such as 10/1 to 19/1).

Figure 1
Regression Slopes (OLS): Pup/Tchr Ratios on Performance Scores


Identifies schools in districts where an increase in pupil teacher ratios is associated with a decline in predicted SAT scores.
Identifies schools in districts where an increase in pupil teacher ratios is associated with a increase in predicted SAT scores.
Predicted SAT Score: +1 indicates one standard deviation above state average; -1 indicates one standard deviation below state average
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-2.5
-3
-2
-1
0
1
Changes in Pupil Teacher Ratios: +1 predicts SAT Score if pupil teacher ratios increased by 1

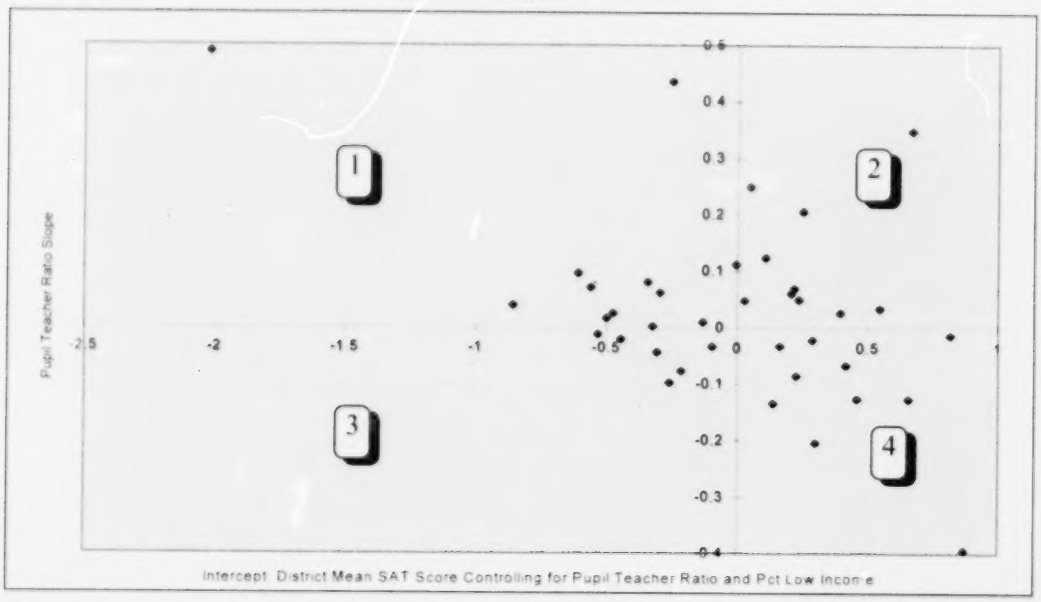
[113] For this regression I have transformed the raw score for each school into *z*-scores [(mean-group mean) group stdev]. The group means are used to distinguish 5th from 8th from 11th grade scores, since each grade receives a different test (and hence the scores differ). Thus, performance is describe in terms of how many standard deviation units a school's score is from the group mean. This transformation is necessary so that all the scores within a district can be used in the regression analysis.

Intuitively, one might assume that schools operating with fewer pupils per teacher (controlling for differences in measures of poverty) would perform better (relative to the statewide assessment test) than schools with higher pupil teacher ratios. Such a relationship would represent a negative correlation (or negative slope coefficient). While this relationship exists among schools in a number of districts, the fact of the matter is that among some schools within districts the relationship is positive: that is that increases in pupil teacher ratios is associated with increases in measures of school performance.

The data displayed in Figure 1 is only for 6 of Utah's 40 school districts. A graph with all 40 regression lines is visually too confusing to merit presentation. Nonetheless, it is appropriate to ask whether these variations in direction and magnitude of the pupil teacher ratios slope exist for more than 6 of Utah's 40 school districts. Figure 2 displays this information in a scatter plot for the 38 districts with regression statistics . The X-axis displays the intercepts (mean performance) and the Y axis the coefficient slopes for pupil teacher ratios. Four quadrants divides this graph into meaningful sections. The interpretation of each of the quadrants is provide.

- Quadrant 1 shows those schools in districts where the mean performance is **below** the state average and the slope coefficient is **positive** *(indicating that a reduction in pupil teacher ratios will reduce predicted performance scores).*
- Quadrant 2 shows those schools in districts where the mean performance is **above** the state average and the slope coefficient is **positive**.
- Quadrant 3 shows those schools in districts where the mean performance is **below** the state average and the slope coefficient is **negative** *(indicating that a reduction in pupil teacher ratios will increase predicted performance scores).*
- Quadrant 2 shows those schools in districts where the mean performance is **above** the state average and the slope coefficient is **negative**.

Figure 2 Scatter Plot of District Means (z-scores of raw SAT scores) and Pup/Tchr Slope for 40 Districts



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Interpretation of the scatterplot suggests that the production functions (the expected change in outcomes with changes in the inputs) vary from district to district. In other words, the relationship between changes in performance with changes in pupil teacher ratios varies from district to district. There are any number of factors that may explain this circumstances. For example, imagine a district with 2 schools with students performing well on the statewide assessment test and 2 schools with students not performing so well. If the poorly performing schools operate with fewer students per teacher then the regression slope of this relationship will be positive. If this relationship was consistent across all districts, then the regression slope and statistic would be very significant. Instead, considerable variation around the magnitude of the slope as well as the direction of the slope exists. In other words, it appears as if the production characteristics of schools within districts vary significantly from district to district. In this light, efforts to simply reduce pupil teacher ratios without consideration of other production factors is not likely to have the cumulative effect desired.

Level 2 (District) Regression Statistics

The preceding evidence does not include consideration of how schools would perform if they changed the means by which they organized and delivered services. Rather, the results say something about what one should expect given the existing production characteristics of schools within districts (including pupil teacher ratios). One of the most obvious differences among these schools is that the amount of money provided to support instruction varies from district to district. In other words, the overall level of support, regardless of how schools attempt to organize their production strategies, varies. Thus, if additional money significantly interact with variations in pupil teacher ratios to positively affect the performance of student learning, then the relationship should be evident in the existing data.

The problem with simply regressing district level expenditures per pupil against performance scores is that important information about variations at the school level is lost. Use of Hierarchical Linear Model regression statistics provides a means by which to examine variations in expenditure levels (a district level characteristic) while recognizing variations in performance, pupil teacher ratio and percentage of students identified as low income at the school level.

The between district HLM results are shown in Table 4. There are 3 between district equations; one for each of the parameter estimates in the within school equations. Generally, the findings suggest that variations in per pupil expenditures for instruction (INST9394, G01) are significantly related to performance (INTRCPT1, B0). The direction of the coefficient is negative; a result that runs against the intuitive expectations of educators and policy makers, even if the findings of researchers have been consistent on the point for more than two decades. Controlling for differences in pupil teacher ratios, and percentage of low income students, an increase in per pupil expenditures is associated with a decline in measures of performance.

Although variances in pupil teacher ratios are not significantly associated with changes in school level performance the relationship is positive, which means that reductions in pupil teacher ratios are associated with declines in measures of performance, even accounting for differences in expenditure levels at the district level. These findings,, like those discussed above, are not what one would typically expect, especially when controls for socio-economic status are included in the analysis.

Variations in the percentage of students identified as low income is statistically significant, and provides the most statistically powerful relationships evident in the regression. Increases in the percentage of students identified as coming from low income homes is associated with declines in performance measures, even when controlling for differences in pupil teacher ratios and differences in expenditures levels.

Table 4 HLM
Regression Results

Fixed Effect	Coefficient	Standard Error	T-ratio	P-value
For INTRCPT1, B0 (Average Performance)				
INTRCPT2, G00	-0.0249	0.0799	-0.312	0.377
INST9394, G01	-0.0003	0.0001	-2.467	0.022
For PRTAVG slope coefficient, B1				
INTRCPT2, G10	0.0187	0.0170	1.100	0.215
For LINCPTM slope coefficient, B2				
INTRCPT2, G20	-0.0314	0.0045	-6.991	0.000

The results of this analysis indicate that increased expenditure levels and reductions in pupil teacher ratios are not sufficient, in and of themselves, to overcome the influence of socio-economic factors affecting measures of performance. Given the current production function operating in schools, the net predicted effect of reducing pupil teacher ratios by 1 is next to nothing. As noted above, these finding may seem counter-intuitive, since our belief structure strongly supports the premise that fewer pupils per teacher must provide students with additional learning opportunities they otherwise would not have. Such a premise assumes, however, that teachers utilize these reductions in load to enhance instructional opportunities rather than simply relax. Moreover, if teacher do invest the residual benefits from reduced load students must still initiate the effort capitalize on these opportunities least they fall to no use. Even if teachers are able to utilize these resources to enhance student services, and students take advantage of them, the current model assumes that the results of these efforts will be evident on the test assessing performance. Without additional points of intervention along the causal chain it is not reasonable to expect that the provision of more money and reduced pupil teacher ratios will obviously achieve the results desired by politicians funding such programs. These, incomplete efforts to help may, in the end, be worse than doing nothing at all, since the appearance of things leads the untutored student of these issues to blame the teachers or students.

DISCUSSION OF FINDINGS

The proposition that educational problems can be resolved by giving educators more money is one that has come under increasing scrutiny in the last decade (Hanushek, 1991; Brimelow, 1986). Underlying these opinions is several decades of research that has examined the relationship between additional resources for education and achievement. Hanushek (1991, 1989) has compiled the results from 187 of these studies and found that only about 20% of the studies produce statistically significant results (indicating that the relationships between money and academic performance are more than a matter of chance). Moreover, of those studies that do find statistically significant results, only about half of them show a positive relationship (i.e. that more money is positively associated with higher levels of achievement). In other words, the other studies with statistical significance indicate that more money is associated with a decline in achievement.

What do these findings, coupled with the evidence Hanushek describes, tell policy makers in Utah targeting additional funds for highly impacted schools? First, the data indicate that money by it-self is not sufficient to address the problems confronted by educators. Thus, policy makers probably should not "give" educators money and then "expect" them to easily obtain the results that for decades have eluded the best of intentions and plans.

The findings do suggest potentially significant points of intervention. First, the most powerful predictor in the regression was that related to family factors (in this case wealth). Policies that do not address the role of the family in school achievement are probably doomed at the onset. The significant role of the family in student achievement is a long-standing finding in educational research (Coleman 1966; Jencks, et al., 1972). In recognition of this evidence one possible source of support for urban schools, and for school reform in general, is Utah's Center for Families and Schools. The activities of this organization directly address the role of family in education. Considering the powerful influence of family factors on achievement this point of intervention appears to hold considerably more potential than simply reducing pupil teacher ratios.

Second, the finding suggest that pouring money into the general coffers of education holds little promise of promote the production capabilities of schools necessary to realize the change in achievement desired. There is little evidence to suggest that simply reducing pupil teacher ratios will have much effect on measures of performance (Glass, 1982). Without changing the strategies by which educators operate, there is not great reason to expect significant changes in the performance of students in schools. Programs such as John Bennion's Center for Urban Studies, at the University of Utah, School of Education, directly address the issues of how to utilized resources in innovative and productive ways. Without such training educators are very likely to continue using resources in much the same way they have always done. There is little reason to believe that pouring good money after bad will lead to the goal of improved measures of performance. Programs that specifically train administrators in ways to use resources

productively hold the promise of addressing this fundamental issue with regard to school improvement.

Third, educational reform has become a growth industry. Politicians, who otherwise know little about education and how it works, madly go about the business of promoting reform. Consultants are busy assisting with reform ideas. Educators are writing strategic plans for reform as well as writing grants to support reform agendas. Meanwhile, teachers have to cope with these additional demands for reform, as well as the long-standing demands to provide good instruction to children who need it. Education is a complicated business, and simple minded solutions, such as throwing money at the problem or using district report cards (like that advocated by the Utah Taxpayer Association), are not likely to add constructively to the solution. Eric Hanushek (1991) makes the argument that many of the current "reform" agendas may not be good policy; the ideas are appealing and politically correct, but their implementation does not sustain school improvement.

Hanushek (1991) favors performance based policies that provide incentives for improvement over existing policies that tend to ignore such factors. Improvement should not, however, be based on simple measures of absolute achievement (i.e. school X scored such-and-such, while school Y scored such-and-such more or less). Rather, the issue is one of rewarding those schools that show improvement, what economists call value added policies.

Historically proposals for such incentive plans have focused on the merit of specific teachers rather than on the performance of the whole school. I agree with Hanushek the performance based policies should be structured as group incentives, recognizing the performance of the collaborative efforts of teachers within a school rather than forcing competition among teachers. Indeed, I argue that those who advocate market oriented competition as a means to improve public education simply do not understand the nature of the organization and tasks of education. Successful schooling requires a coordinated effort among numerous actors. Group incentives provide the means of promoting such collaboration. The Centennial School Program represents, in a small way, a model of a group incentive plan but the distribution of the aid is based more on a good plan than documented evidence of improved performance. None the less, teachers capturing Centennial grants must work collaboratively and, hence, such grants provide group incentives for collaboration.

Group incentive plans should incorporate a series of performance measures, including measures for administrative goals, facilities improvements, and community development. Indeed, if equity were a fundamental goal, which arguably and legally it is, the performance goals could be constructed to assess equitable access and reward structures could be devised to recognize such efforts [see Berne & Picus (Eds.). Outcome Equity in Education. 1994]. In other words, the move towards incentive-based policies need not forsake basic equity goals, but can incorporate and promote efficiency goals which are not frequently incorporated in existing policy plans.

The legislation for highly impacted schools avoids some important pitfalls of previous fiscally oriented reform efforts. School finance reform, for the last several decades, has been typically driven by judicial pressure to equalize the distribution of expenditures per pupil across districts within states. The effect of these reform efforts has been 1) to increase the overall size of the appropriation while, 2) ignoring the issues of how school organization promotes the efficient utilization of resources. The aid provided to Utah's highly impacted does little to address the second problem, but it does target money more directly and efficiently to the schools that are needy. According to Monk (1994), legislative funding that goes directly to schools represents a funding policy on the rise among state legislatures around the country. Couple these policies with programs that support family participation in educational practice, and that promotes innovative means by which to change the way educational services are produced and delivered, and the final results may have a much better chance of effecting the change so fervently desired.

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APPENDIX A: HIGHLY IMPACTED SCHOOLS BILL

Class Size At Highly Impacted Schools
1995 General Session
State Of Utah
Sponsor: Scott N. Howell

An act relating to public education; providing a $5,000,000 appropriation to reduce class sizes and provide additional resources at highly impacted schools in order to assist students at those schools; providing a distribution process for the appropriation; providing for a progress report on the program; and providing an effective date.

This act affects sections of Utah code annotated 1953 as follows:
enacts:
53a-17a-124.7, Utah code annotated 1953
be it enacted by the legislature of the state of Utah:
section 1. section 53a-17a-124.7 is enacted to read:
53a-17a-124.7. highly impacted schools.
(1) there is appropriated to the state board of education an amount of $5,200,000 to reduce class sizes and provide additional resources for individual assistance to students at those schools determined by the board to be highly impacted.
(2) the board, in consultation with the governor's office, shall base its determination of highly impacted schools on the following criteria as reported by the schools in their applications:
(a) high student mobility rates within each school;
(b) the number and percentage of students at each school who apply for free school lunch;
(c) the number and percentage of ethnic minority students at each school;
(d) the number and percentage of limited English proficiency students at each school; and
(e) the number and percentage of students at each school from single parent families.
(3) (a) the board, through the state superintendent of public instruction, shall establish application deadlines for participation in the program.
(b) the state superintendent of public instruction shall administer and distribute the appropriation to individual schools

according to a formula established by the board.

(c) (i) each participating school shall receive a base allocation from the appropriation.

(ii) additional monies from the appropriation shall be allocated on the basis of a formula which takes into consideration the number of students at each school who are within the categories listed in subsection (2), as compared to the state total for schools within the program.

(4) this appropriation is in addition to any appropriation made for class size reduction in title 53a, chapter 17a, minimum school program act.

(5) (a) the board shall monitor this program and require each participant school to file a report on the use and effectiveness of the appropriation in meeting the educational needs of students who attend these highly impacted schools.

(b) the board shall make a report to the legislature's education interim committee on the success of the overall program, including a recommendation for continuation or termination of the program.

Section 2. Effective Date.

This Act Takes Effect On July 1, 1995.

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